The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XLV. CHICAGO, ILLINOIS, JULY 15, 1905. No. 3.

Address

THE AMERICAN MEDICAL ASSOCIATION: ITS ORIGIN, PROGRESS AND PURPOSE.

PRESIDENT'S ADDRESS, AT THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT PORTLAND, OREGON, JULY 11-14, 1905.

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Both established usage and the by-laws of this Association require the presiding officer to deliver annually an address touching such matters as he may deem of importance. In the early years of the Association the President's address was devoted to an epitome of the progress of medical science in its various departments during the preceding year. Since distinguished orators are now selected annually to perform this important service, the President's address may be more appropriately directed to subjects relating to the general welfare of the profession and to the purposes for which this great organization was established.

The annual session of the American Medical Association is always an occasion of special moment and universal interest to the medical profession of America. That several thousand physicians from all sections of our broad country assemble annually for the advancement of medical science and the elevation of our profession is a splendid testimonial to the earnestness of professional achievement and aspiration. The occasion cannot but command the respect of all who are concerned in the progress of science and the betterment of the human race. The spirit which pervades such an assemblage is the desire for improvement, for the increase of scientific resources, and for the diffusion of medical knowledge. Closely related to these ennobling purposes is that social instinct of our profession, which would elevate and be elevated by interchange of views resulting from common experiences, and by mingling together in pleasant friendly intercourse. Happily our present meeting is held under ideal conditions for the exercise of all the functions of such an organization. Perfect harmony prevails. The differences which at times have divided us have all been satisfactorily adjusted; and we are to-day as one man in our united effort to advance the science of medicine, to enlarge the scope of its beneficence, and to promote the welfare of our profession.

Since our meeting at Atlantic City one year ago, many of our members have ceased their labors and passed to the great beyond. The list is a long one. Among the number is that of Nathan Smith Davis. He was one of the founders of this Association, an ex-president; a member of the Board of Trustees, the first editor of THE JOURNAL, and for years a power for good in its affairs. He lived beyond the time allotted by the Psalmist, and all his years were filled with labor and with honor. I will not undertake at this time to estimate adequately his great services, or appropriately to pay tribute to his memory. This will be done later in the session by one better prepared than I to eulogize our departed leader.

At our last session, Dr. B. C. Pennington of Atlantic City was chairman of the Committee of Arrangements. He was honored with the fourth vice-presidency in recognition of his ability, his high professional standing, and his devoted services to this Association. His name, too, is now found among the year's honored dead. A cultured gentleman, a learned and accomplished physician, his memory will ever remain as an inspiration for high ideals and noble endeavor.

EARLY YEARS.

When the American Medical Association was organized in 1846 it is doubtful if there were more than 25,000 physicians in the entire United States of America. It was organized as a representative body, composed of delegates from affiliated societies, colleges, and hospitals throughout the states. It was a body of delegates from all state, district, county and other medical societies which adopted the code of ethics of the national association. The apportionment of delegates was on a basis of one for every ten members of the societies represented. For a number of years the delegate body thus constituted was not too large for the discussion of important subjects and the ready transaction of business.

With the rapid increase in population, the admission of new states to the Union, and the settlement of new territories, came a vast increase of physicians, with a corresponding multiplication of state and county societies. Without change in the apportionment of delegates, the national association developed into a body too large and unwieldy for the transaction of business. Indeed, during the latter years under the original system of organization, practically every member in attendance on the annual sessions was a delegate. While the work of the sections was carried on with increasing excellence, the important functions relating to legislative and other matters, belonging to a great national organization of the medical profession, were neglected. The general sessions brought together hundreds of delegates, forming a convention so large that thorough discussion of important questions and judicious action on the same became practically impossible. Moreover, the delegates attending the annual sessions constituted a body annually changing in personnel; and the sources of attendance changed with the sections of the country in which the meetings were held. In consequence there could be neither that equal representation of all sections

which must obtain in a national body, nor continuation of work from year to year along definite lines.

THE SECTIONS.

During these early years it was the steady improvement in the work of the sections which drew the best element of the profession to the annual sessions. Many leaders of the profession in the various states attended the sections in which they were interested, and took no part in the proceedings of the general meetings. The sections have now reached such a high degree of efficiency that they have attained the standard so much desired, and rank as leading special national societies in the several departments of medical science which they represent.

As chairman of the Committee on Sections and Section Work, I have carefully studied the workings of the sections. As a result of this experience, I would repeat the recommendation of my distinguished predecessor in this chair, that the secretary of each section should be elected for a term of years. No national society can maintain its efficiency which changes its secretary annually. And again, I would suggest that the officers of the several sections meet together in conference as soon as practicable after the adjournment of the session at which they are elected, in order that definite plans may be formulated for the scientific work of the next annual session. The conference of section officers in New York last November contributed much toward the development of the admirable scientific program now before you for the present session.

It should be the aim and purpose of every member of this Association to aid the officers of the sections in elevating continually the standard of scientific work. Every American physician may have pride in the work done year after year in the sections of this Association.

THE JOURNAL.

It would be a difficult task were we to undertake a definite estimate of the influence of THE JOURNAL in the great work which this Association has accomplished during the past two decades. When it was decided to discontinue the annual volume of transactions, and to establish a weekly journal, the change was viewed with apprehension by many. The influence of this publication, the property of the Association, in stimulating research, diffusing knowledge, elevating professional thought and conduct, and building up this great organization cannot be computed. This part of my discourse is so replete with suggestion, that I fear the time and space at my command will not permit such consideration as should be devoted to it.

The volumes of THE JOURNAL mark the steady and continued growth of the Association, and likewise bear testimony to the fact that THE JOURNAL itself has been a potent factor in that growth. Under the judicious direction of the Board of Trustees THE JOURNAL has steadily advanced as a scientific publication. By the untiring daily services of the present able Editor, it has leaped into the very front rank of scientific publications, and in all that a great weekly medical journal should be it has no superior in the world. The power exerted by such a publication as a medium of communication among the members of the Association is inestimable, to say nothing of the other more important functions performed by a great weekly journal. It has been the most potent instrument in building up this Association to its present proud position as the largest medical organization in the world. No other American medical periodical has a circulation so distinctly national, and no other journal can sustain the same relation to the great body of the medical profession. It is a great engine whose power is constantly increasing, constantly extending. With such increased power comes increased responsibility, much of which rests with the House of Delegates in the selection of proper men to fill the responsible places of the trustees. No other office should be regarded higher in honor than that of the trustees, as no other affords greater scope for unselfish labor and efficient service to the Association. Under the conditions of our organization more power is invested in this board than the combined power of all other officers.

THE NEW ERA.

At the annual session of 1900 a committee on reorganization was appointed, and one year later, at St. Paul, the report of the committee was submitted and adopted. It included a new constitution, which altered the basis of apportionment for delegates, so as to reduce the delegate body to 150, and definitely established a close relationship between the national organization and the state, district and county societies. For the first time a practical scheme of complete organization of the medical profession of the United States was provided. This is the fourth annual session held under the new plan of organization.

Previous to the reorganization, the valuable scientific work of the sections constituted almost the sum total of the effective work accomplished by the Association. Matters appertaining to medical education, to the public health, to national legislation, and to the welfare of the profession received no deliberate consideration; and in consequence no decisive action was carried out. This condition existed for the reasons already mentioned. In a word, the very objects and aims for which the Association was organized were thwarted by the growth of the Association into an unwieldy delegate body. Under the reorganization, the House of Delegates, in which the membership of the state societies is proportionately represented, now gives deliberate consideration to those important matters, already indicated, which under the former organization were neglected.

The influence of the revised plan of organization was immediately apparent in the increased attendance at the annual sessions, and the stimulus felt in every purpose of the Association. And each year this influence has grown, until some idea can now be formed of the great possibilities to come from organization on a definite and practical plan. The good results to accrue to the profession as a whole, and to every member as an individual, are so positive that no subject can deserve more careful consideration by this body than that of medical organization. Indeed, it is the fundamental question before us, and on its decision depend the results of all our other efforts in all directions.

In order that we may thoroughly appreciate the origin and purposes of the Association, and thereby be better prepared to meet its present and future requirements, I have very imperfectly outlined the history of its earlier years. During the more than half century of its existence it has always brought to its councils the ablest and best men in the profession of America. Among its leaders from the beginning are found the most eminent physicians and surgeons of the day. In the list of its active members are the names of Samuel D. Gross, Paul F. Eve, Austin Flint, Marion Sims, N. S. Davis, Alfred Stillé, Lewis A. Sayre, and many others which adorn the annals of American medicine. It

has from the beginning been a great power with the profession of America. Its greatest influence, as I have already indicated, was in the growth and diffusion of scientific knowledge through the splendid work of the sections. In elevating medical education, in promoting legislation, and advancing the powers of public health organizations its influence was most felt in the development of a helpful public professional opinion. The extension of the influence and advantages of organization to the masses of the profession was gradually lost sight of in the annual meetings, and the work relating to matters of public policy was spasmodically considered and imperfectly executed. Whatever was accomplished along these lines worthy of mention was the work of committees. The necessity of reorganization was appreciated by the leading members of the Association long before it was accomplished. In 1888, Dr. N. S. Davis as chairman of a committee appointed for the purpose, reported a scheme of reorganization very similar to that adopted in 1901 at St. Paul.

ORGANIZATION.

"The object of this Association shall be to federate into one compact organization the medical profession of the United States, for the purpose of fostering the growth and diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment and enforcement of medical laws, of enlightening and directing public opinion in regard to the broad problems of state medicine, and of representing to the world the practical accomplishments of scientific medicine." (Article II, Constitution of the American Medical Association.)

If every physician worked alone, relied on his own unaided observation for his knowledge, never looking outside his own scope of view, ignorance would prevail and there would be no progress in medical science. Medicine is not an exact science, and until perfected by extorting from Nature all her secrets, it must from the nature of things continue to be a progressive science. Never before in the history of medicine has such marked progress in all its departments been made as during the present age. Theories have been supplanted by facts; laboratory research and clinical investigation have taken the place of tradition and authoritative opinion. To rely on the accomplishments of the college period is to be left behind in hopeless incompetency. The advance of medical knowledge is to be observed first in our medical societies, and afterward in our scientific medical journals. In the medical societies innovations are subjected to criticism and discussion by those competent to judge the merits of scientific contributions. Moreover, there is a stimulus to study and investigation from association with workers in the same field; and one obtains a broader view of every subject so considered. The physician, more than any other professional man, is isolated by the conditions of his life, and to no profession is the educating influence of society work so essential and invaluable. This same condition of isolation is at the foundation, for the most part, of the jealousies and petty bickerings so prevalent in our profession. These troubles are, as a rule, the result of misunderstandings, and are both prevented and corrected by coming together in a society composed of physicians. The lonely worker in any calling is prone to become narrow, suspicious, and morbid. Our medical societies are the great post-graduate schools of the profession, where knowledge is increased and individual character developed.

But the promotion of scientific investigation, and the diffusion of medical knowledge are not the only objects of organization. Our profession has a most essential and important duty in relation to the public health. Through no other agency can municipal, state and national health authorities formulate and secure recognition of laws to prevent and control disease. Another duty no less essential is so to regulate and to control medical education that the ignorant and unworthy shall not be admitted to the privileges of the profession, thereby preserving the time-honored standard of professional honor and scientific capability. In this age of organization, without it the profession is powerless to secure the enactment of humane sanitary laws, by which alone the people can be protected from preventable diseases. The welfare of the profession, collectively and individually, can only be subserved by organization. Without such organization, our profession, as a body politic, will be without unanimity of sentiment or action in relation to the important scientific, ethical, and social questions which confront us; and consequently without influence politically, socially or otherwise.

In the declaration of the constitution adopted at St. Paul, which I have just quoted, the American Medical Association has undertaken to place within reach of every reputable medical practitioner in the United States these incalculable advantages of medical organization.

The Committee on Reorganization appointed in 1900 has treated this subject in a masterly manner. After a careful study of the condition of the profession throughout the states with relation to organization, reports have been made to the Association showing the needs of the profession and the extent of the work required. A uniform plan of organization for state and county societies, making the county society the unit of organization, and federating all state societies in the national association in harmonious co-operation, has been prepared by the committee. The able chairman of this committee has with remarkable tact, patience, and good judgment given his personal supervision to this great work in almost every state and territory. In his latest report it is announced that all the states and territories, except three, and including Hawaii and Porto Rico, are now organized on a practically uniform plan, with universal local societies, and coincident membership in them and the state associations as the cardinal feature. To illustrate the magnitude of this work, I mention that, under the stimulus of reorganization after the plan of the committee, the Michigan State Medical Association increased in membership in one year from 452 to about 2,100. Texas increased the membership in the same time from 382 to 2,510, while several states quadrupled their membership. While these results are phenomenal, and elicit our admiration, it will be realized how much remains to be done when it is considered that few of the states have over 50 per cent. of the eligible members of the profession enrolled as members of the society. Indeed, the work is yet almost in its infancy. What has been accomplished is an assurance for the future; and considering the brief time since reorganization began, is a high tribute to the enterprise of the national association and the work of its able and efficient committee. The possibilities of this work are stupendous, and as it proceeds the Association can confidently undertake the great reforms of such incalculable moment to the profession and the

public. In his official report to the House of Delegates one year ago, the chairman of the Committee on Organization, after reporting the splendid results of his labors during the year, said:

The real test of our organization will come in each state when the first out-burst of enthusiasm has passed, and county societies, the foundation for everything, are likely to disappear as rapidly as they have been formed, unless their usefulness to the rank and file of the profession can be demonstrated in a very broad way.

In recognition of this fact, it is of the utmost importance that the personal attention so effectively given to this work throughout the states by the chairman of the committee be continued.

MEDICAL EDUCATION.

When the American Medical Association was founded in May, 1846, the delegates assembled in response to the following preamble and resolutions of the Medical Society of the State of New York:

WHEREAS, It is believed that a national convention would be conducive to the elevation of the standard of medical education in the United States, and

WHEREAS, There is no mode of accomplishing so desirable an object without concert of action on the part of the medical societies, colleges and institutions of all the states, therefore be it

Resolved, That the Medical Society of the State of New York earnestly recommends a national convention of delegates from medical societies and colleges of the whole union, to convene in the City of New York, on the first Tuesday in May, in the year 1846, for the purpose of adopting some concerted action on the subject, set forth in the foregoing preamble.

From this it is apparent that this Association was founded with the avowed and specific purpose of elevating the standard of medical education in this country. This subject has constantly received consideration from the Association throughout the years of its existence; and while no distinct and positive reform marks its action, the perpetual demand for improvement undoubtedly moulded the public sentiment of the profession which ultimately stimulated action on the part of the medical colleges. Since the addresses of my two distinguished predecessors, who immediately preceded me in this chair, were devoted to the consideration of medical education, I shall only make brief allusion to this subject. The several national organizations and the many state boards which are now dealing with this important professional problem invest the changing conditions with peculiar interest. The present is a transition period in the advancement and reform of medical education in America.

The consideration of this subject in the House of Delegates culminated in the establishment last year of the Council on Medical Education of the American Medical Association. During the past year the council has taken up its work with exceptional energy and good judgment, and is directing its efforts along most practical lines. The first annual conference was held in Chicago April 20th last. Representatives of many state examining and licensing boards, of the American and Southern Medical College associations, and of the government medical services, attended and participated in the discussions of the papers presented. The plan and scope of the work of the council can be best appreciated by a consideration of this extract from the address of the distinguished chairman of the council delivered to the conference:

What we need is co-operation, especially the co-operation between the medical profession, represented by the American Medical Association, and the state and county medical societies, and the state authorities, represented by the state licensing and examining boards. The most important question, therefore, before this conference is, How can the American medical profession and the state licensing bodies co-operate to elevate and control medical education? It is believed that such co-operation is possible. In such co-operation it will be the function of the American Medical Association to represent and possibly mold the opinion of the medical profession, and employ its influence and the influence of the county and state medical societies in obtaining proper medical legislation. In such co-operation it will be the function of the state licensing bodies to protect the interests of the public and the profession by seeing that the medical laws are properly interpreted and enforced, and from their intimate knowledge with the medical acts they can often be of service in securing or modifying medical legislation.

It is not the purpose of the Council on Medical Education of the American Medical Association to attempt to arrogate to itself any special powers, nor does it desire either to criticize or interfere in any way with any of the agencies which are already in the field. If its creation is to result in good, it must be the means of obtaining co-operation between the medical profession, and the medical schools, the colleges of arts, the state examining boards, the government services, and all the factors which are interested in elevating and controlling medical education.

By securing co-operation of the various state and national bodies engaged in this important work, recognizing the varied interests involved in the numerous states of the Union, and fostering an intelligent public sentiment, so essential for every great reform, the influence of the Association will be of the most effective character.

MEDICAL LEGISLATION.

Chapter VII., Section 3, of the by-laws provides a permanent Committee on Medical Legislation "to represent before Congress and elsewhere the wishes of this Association regarding any proposed legislation that in any respect bears on the promotion and preservation of the public health, or on the material or moral welfare of the medical profession." This committee was appointed in 1903, and under the leadership of its accomplished and energetic chairman proceeded at once to organize the auxiliary committee provided in the by-laws. This being a permanent committee, its work will be continued from year to year. With the auxiliary committee, representing every state in the Union, and the several medical departments of the Government service, every representative of the people in Congress can be reached directly. The importance of this work is so apparent that I need only call attention to it at this time, and urge on all members of the Association the necessity of aiding and co-operating with the committee at all times. The disregard of the good work of the medical profession in the public service (to say nothing of the indignities offered) on the part of Congress is notorious; and it is only by such concentrated power of the profession, intelligently directed, that such injustice may be overcome. I commend to your consideration the report of this committee in order that you may appreciate the important work already projected.

COUNCIL ON PHARMACY AND CHEMISTRY.

The use of proprietary medicines in the treatment of diseases has become one of the most confusing and demoralizing questions of the day. All proprietary medicines must not be classed as secret nostrums, for there are many honestly made and ethically advertised pro-

prietary preparations that have therapeutic value and that deserve the approval of the medical profession. But there are many preparations offered the profession, which are protected by copyright or trade-mark, with formulæ more or less fictitious, and for which are made extravagant claims, which are in fact secret remedies. These preparations are so exploited by the manufacturer that the physician is persuaded to use them instead of writing a prescription; and since they usually bear popular names and plausible therapeutic claims, they appeal to the fancy of the laity. The field is an enticing one for commercial enterprise since these preparations in many instances are simple mixtures and contain the most inexpensive drugs. The use of such remedies is both unscientific and unjust, alike to physician and to patient.

The separation of the legitimate pharmaceutical preparations from the class of fraudulent nostrums described is a most difficult undertaking. This perplexing problem forced itself from year to year on the attention of the Board of Trustees in the effort of the board to keep the advertising pages of THE JOURNAL free from unethical advertisements. In order to have thorough protection and to make no unjust discrimination, the board has established the Council on Pharmacy and Chemistry to make the necessary investigations. The council is composed of pharmacists and chemists of national and international reputation. It will be the aim of the council to publish in book form, a list of the preparations which are not officinal, yet which conform to the proper ethical standard. The work of the council will be similar to that of the Committee on Revision of the United States Pharmacopeia.

The magnitude and importance of this work is such that I desire to direct attention to it here, and to commend it to the members of the Association as deserving every possible aid and advancement. It is the only practical way to deliver the profession from one of the greatest curses that ever came on it.

It has been my endeavor on this occasion to outline the plans of the founders of the Association, briefly to trace the evolution of those plans throughout half a century of progress, and to recount some of the purposes that invite our active exertions at the present time. From a small body of delegates our Association has increased until it is now the largest medical organization in the world. It owns valuable property, has accumulated a considerable fund, and has a large annual income, all of which belongs to, and is subject to the control of, the members who through their delegates select the Board of Trustees to manage their funds.

The possibilities of the work before us are almost beyond calculation. In acting as the representative and agent of the 120,000 physicians of the United States, the Association is assuming great responsibilities, which will increase from year to year. It will require administrative and executive ability of the highest order to meet these demands; but there is both prophecy and proof in the work already accomplished that men will appear as needed to discharge the supreme duties of a great profession in behalf of science and humanity.

Organization.—If we will maintain our organization in societies as developed in the natural evolution of progress, we will be stronger in the community and more likely to take the place which belongs to us in society.—Williams, in *Journal of the Michigan Medical Society.*

Orations

THE SURGEON AND THE PATHOLOGIST.

A PLEA FOR RECIPROCITY AS ILLUSTRATED BY THE CONSIDERATION OF THE CLASSIFICATION AND TREATMENT OF BENIGN TUMORS OF THE BREAST.

ORATION ON SURGERY AT THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, PORTLAND, OREGON, JULY 11-14, 1905.

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BOSTON.

SYNOPSIS.

1. INTRODUCTION: Subject of paper. Confusion of nomenclature. National and local differences. Differences between clinician and pathologist. Need of co-operation. Clearing house.
2. MATERIAL: 658 consecutive cases of chronic disease of breast in M. G. H. 100 cases from private practice (70 diagnoses in 199 cases of benign breast tumor in M. G. H.).
3. CLASSIFICATION: Normal anatomy of breast. Relation to tumors and diseases. Classification offered. Variation from other classifications.
4. CARCINOMA: 517 cases. Proportion to other tumors, 68 per cent. (70 per cent., M. G. H.) (58 per cent., J. C. W.). Varieties. Age incidence. Occurrence with or resulting from benign tumors and diseases, as Involution, papillary cyst adenoma, periductal fibroma, Paget's disease.
5. FIBRO-EPITHELIAL TUMORS: Fibrous Group. Periductal tumors. Fibroma, myxoma, sarcoma. Frequency. Pathology. Clinical symptoms. Diagnosis. Course. Prognosis. Treatment.
6. FIBRO-EPITHELIAL TUMORS: Epithelial group. Cyst-adenoma. Fibro-Cyst-Adenoma: Rare. Epithelial exaggeration of periductal fibroma. Pathologic symptoms. Treatment. Papillary Cyst-Adenoma: Pathology. Symptoms. Prognosis. Treatment.
7. HYPERPLASIA. DIFFUSE HYPERTROPHY: Two varieties. Rare. Relation to pregnancy and to genital abnormalities. Pathology. Symptoms. Treatment.
8. HYPERPLASIA. ABNORMAL INVOLUTION. "Chronic Cystic Disease." Historical. Synonyms. Pathology. Cystic and proliferative. Types of proliferation. Symptoms. Course untreated. Prognosis. Treatment.
9. CHRONIC INFLAMMATION: Chronic abscess. Ductal mastitis. Relation to lactation. Symptoms. Course. Pathology and Treatment. Galactocele.
10. SINGLE RETENTION CYST: Mechanical origin. Rarity. Symptoms. Confusion with abnormal involution.
11. NON-INDIGENOUS TUMORS OF BREAST: Sarcoma. "Solid sarcoma." Rare. No relation to breast. Symptoms. Diagnosis. Treatment. Lipoma. Retro-mammary. Symptoms and treatment. Lymphangioma.
12. SUPERNUMERARY BREASTS: Occurrence. Situation. Tendency to tumor formation.
13. TREATMENT of benign tumors of the breast. "Plastic resection." Indications. Method. Results.

In selecting a subject in a special department of medicine which should be of interest to the great body of members of this Association, it has occurred to me that the discussion of the diseases of the mammary gland would be appropriate, as the classification of the diseases of this organ is at present in a more or less unsettled state, and the operative treatment of many of the benign lesions of the breast is a subject which is still open to discussion.

The great impetus which laboratory work has received in recent years in the various medical centers of this country is evidence that the interest taken in the scientific side of medicine has progressed steadily since the awakening of modern pathology in the middle of the last century. American physicians have proved themselves apt pupils, and the beginnings of the generation which is now passing off the stage have already borne fruit which one can not regard otherwise than with satisfaction. The time has already arrived when we in this country are no longer content to receive the dicta of science at second hand, but feel quite competent to take the initiative on ourselves, as our many substantial contributions to medical science amply show. Indeed, I feel convinced that the very practical side of our national character is a most valuable quality in

enabling us to unravel some of the more complicated questions which have been left unsolved by the foreign scientists. The laboratory workers' range of vision, however, is often at best but microscopic, and it is no wonder that, unaided, he sometimes misinterprets the changes rung by nature on some simple theme. Without the laboratory worker's aid, however, the clinician becomes swamped in a mass of clinical detail from

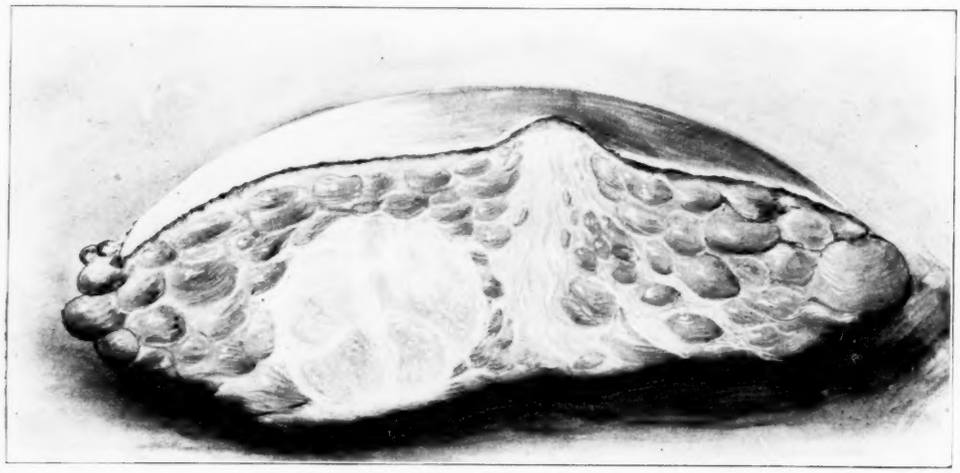

Fig. 3.*—Periductal fibroma. Gross appearances.

which alone he has again and again been unable to extricate himself. There can be little question that the combination of energies which accomplishes most in surgical progress is that obtained by the coöperation of the laboratory investigator with the surgeon of clinical experience. Too long have these two departments of medicine conducted themselves independently and, as I feel, greatly to the disadvantage of them both. The clinician and the laboratory man, however, in these days of specialism seem sometimes in danger of drifting even further apart, and we find some of the modern problems sadly in need of a pathologic "clearing-house" to put things on a more practical basis. This, it seems to me, is the moral which must be read between the lines of the paper which I have the honor to present.

In no department of surgery has the classification of the diseases of an organ or the pathologic nomenclature been more confusing than in the case of the diseases of the mammary gland. Not only has the nomenclature of the diseases of the breast been subject to that continual revision to which all medical terms are liable with advancing knowledge, but in this case national and even local systems have added again to the confusion. The French school, the German, the English and the American schools of medicine rarely agree in their description of any tumor of the breast other than carcinoma, and in the case of the inflammatory or involution changes of the breast the variations in nomenclature are notorious. In view of the always horrible possibility of cancer, however, no woman can regard a lump of any size, shape or consistency in the breast with equanimity, and in no organ does the presence of disease in its earlier stages furnish fewer data for accurate diagnosis. The cry for aid and comfort is always an urgent one, and it behooves the surgeon, therefore, and the general practitioner as well, to be in a position to meet the demand for accurate information with an intelligent and harmonious reply. Such a statement can be furnished only by bringing the modern views of the pathology of these diseases into focus with the clinical pictures which they present. In the hope that I may pave the way for the clinician and the pathologist to "get together" and to put the classification of diseases of the breast on a more intelligible and practicable foundation, I have selected this field of surgery for your consideration.

The material which has served as a basis of this investigation includes, in all, 758 cases of diseases of the breast; 658 cases were taken from the records of the Massachusetts General Hospital.[1] The diseases of the male breast were purposely omitted from this table of cases, and of the total number of cases of diseases of the female breast 10 were omitted because of insufficient data to establish a diagnosis. Acute mammary abscess was also excluded from consideration. With these exceptions all cases of disease of the mammary gland are included which entered the Massachusetts General Hospital during the decade from 1895 to 1905. One hundred additional consecutive cases of disease of the breast have been obtained from my own private practice, making up the total of 758 cases of all varieties with which we have to deal. Pathologic reports were available in nearly every case, and in many instances the actual specimens could be obtained and were used for further study and for purposes of illustration. Four hundred

Fig. 4.—Periductal fibroma. Microscopic appearances.

and fifty-nine of the hospital cases and fifty-eight of the cases in private practice were cancer of the breast. These were included for purposes of comparison and in order better to establish the significant data for diagnosis. The greater part of the study, however, has been

* Figs. 1 and 2 compose the frontispiece facing page 145.

1. Collected and analyzed by Drs. R. B. Greenough and C. C. Simmons, whose valuable assistance in the preparation of this classification I wish here to acknowledge.

devoted to the benign diseases of the breast, 42 in private practice, 199 in the hospital series—a total of 241 cases of benign diseases of the breast. These are exclusive of re-entries or of cases in which two diseases of different types occurred. As an instance of the confusion in nomenclature I might here state that in 199 cases of benign disease of the breast occurring in the

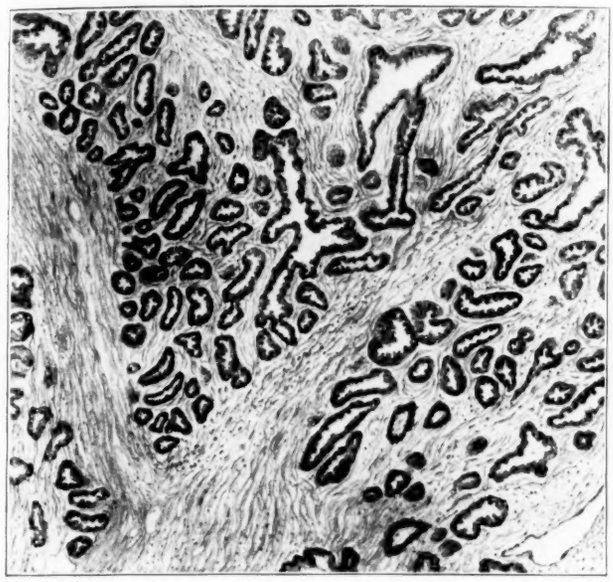

Fig. 5.—Fibro-cyst-adenoma. Microscopic appearances. (Note cyst cavities and exuberant growth of epithelial ducts in lobular arrangement in a stroma of periductal tissue. Gross appearance of this tumor similar to Figure 3.)

Massachusetts General Hospital in ten years, 70 different pathologic diagnoses appeared on the record books.

Before taking up the question of classification of the benign tumors of the breast, I would like to call your attention to some anatomic peculiarities of the mammary gland which distinguish it from any other organ in the body. At no time during the various periods of its life history does it have an enduring type of anatomic structure. At birth the gland is represented by a series of radiating ducts with club-shaped extremities, but with no well-developed acini. The epithelium of these ducts is often in a state of active proliferation, causing swelling and tenderness of the gland, with ectasia of the ducts and supposed inflammation (acute mastitis of infants). Infection through the nipple may undoubtedly occur at this time, but in the vast majority of cases the swelling and tenderness are due entirely to the developmental activity of the gland. No material change in the gland takes place from this time until the age of puberty, when the development of the acini first really begins. An enlargement of the breast, with development of considerable tenderness, is often noticed at puberty in males as well as females. The epithelial structures are now beginning to make themselves prominent, but there is also a characteristic change in the tissue immediately around the ducts. The periductal connective tissue becomes transparent and rich in nuclei and presents a strong contrast to the interstitial tissue of the gland. This transparent periductal tissue is peculiar to the mammary gland. It gives the familiar consistency and shape to the virgin breast and enters largely into the new growths of the breast which take origin at this stage of its life history.

At the time of pregnancy another great change takes place in the anatomy of the breast. Now the epithelial activity of the gland is at its height, the acini multiply enormously, the tree may be said to be in full leaf. Meanwhile the interstitial tissue becomes stretched and the periductal tissue becomes less prominent. After lactation many of the acini wither and disappear, the interstitial tissue is relaxed and the breast becomes pendulous.

The declining period in the life history of the mammary gland may begin in middle life, and presents a condition which is of great interest to the surgeon. The breast, as it were, gradually dries up. Change is noticed especially in the acini and in the interstitial tissue. The epithelium is no longer in a state of active proliferation, but degenerative changes gradually gain the upper hand. Some ducts are choked with epithelial débris, while others are compressed by the contracting interstitial tissue of the gland, and the blood vessels become thrombosed and disappear. Obstruction takes place here and there, and slight dilatation of the small ducts and acini occurs, with induration of the surrounding tissues. If the breast in this condition is gently pressed against the thorax with the flat of the fingers it will be found to contain a large number of small hard nodules. This condition I have described as the "cobble-stone" feel of the breast. It is present in almost every breast at a certain stage of its decline, and should be regarded as a normal condition at this period of the life history of the gland. If the gland is incised these nodules will be found to be composed of fibrous tissue or of small cysts filled with a slightly discolored fluid which derives its hue from solution of the old blood crystals and pigment from the thrombosed blood vessels.

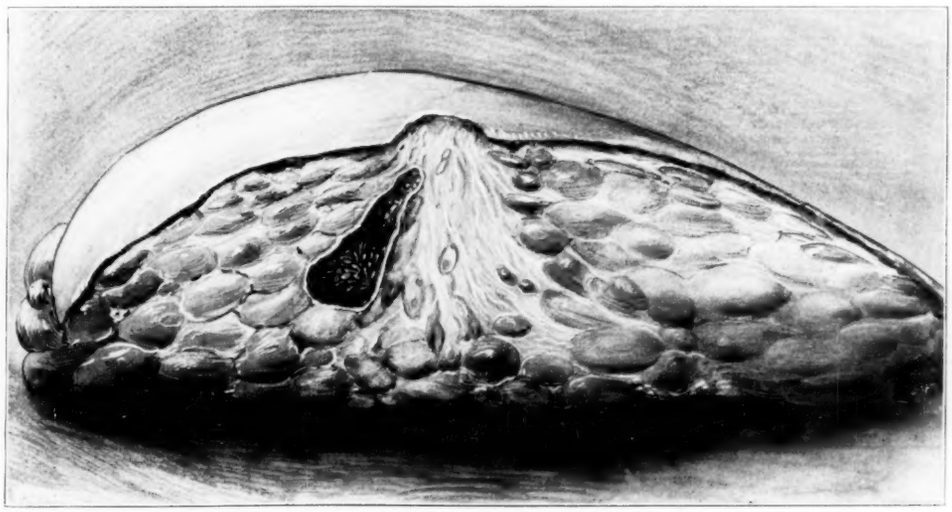

Fig. 6.—Papillary cyst-adenoma ("villous papilloma"). Gross appearances.

* Figs. 1 and 2 compose the frontispiece facing page 145.

The gland tissue is absorbed after lactation[2, 3] and with advancing years, a certain amount of adipose tissue takes its place, and in old age we find the mammary gland represented merely by a few ducts near the nipple and some small strands of fibrous stroma, the meshes of which are well filled with fat. Keeping in mind the anatomic peculiarities of the mammary gland, we find two distinct structures intimately associated with different periods of its life history. I refer to the periductal fibrous tissue so prominent in early life and to the epithelial elements which at certain later periods, as in lactation, attain the perfection of their development. These two structures are so intimately associated one with another that it is impossible for a neoplastic formation to develop without partaking somewhat of the characteristics of both tissues. The periductal fibrous tissue of the gland can not form a tumor without involving, to a certain extent, the epithelium of the ducts. Nor can the epithelial elements grow entirely independent of their fibrous support without placing the growth at once in the category of carcinoma. A consistent classification of the tumors of the breast must, therefore, take into consideration both of these elements, and the term "fibro-epithelial" tumors, suggested by Ribbert,[4] best meets these indications.

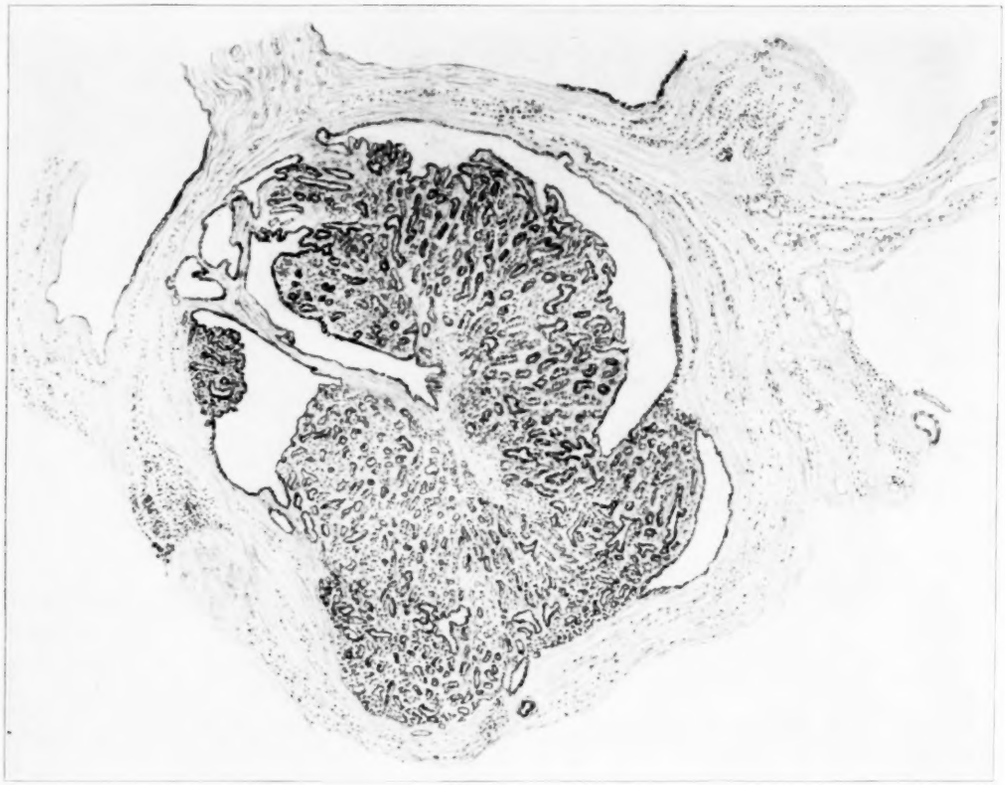

Fig. 7.—Papillary cyst adenoma. Microscopic appearances. (Note exuberant growth of epithelium over papillary outgrowths of connective tissue from the wall of the cyst cavity.

Tumors are classified, however, either according to the nature of the tissue of their origin or the tissue which forms their most significant part. In these fibro-epithelial tumors, therefore, certain subdivisions are possible and, indeed, important, according to the tissues which are most seriously involved. A ready distinction is suggested at once between the tumors which are chiefly of a fibrous character and those in which the epithelium is more involved. This distinction, moreover, has an important clinical value, as there is a tendency of the fibrous group toward sarcomatous change and of the epithelial group toward carcinomatous metamorphosis. Under fibro-epithelial tumors of a fibrous character we may thus distinguish three divisions—the periductal fibroma, periductal myxoma, and periductal sarcoma. Those of the epithelial group we can divide into the fibro-cyst-adenoma and the papillary cyst-adenoma. In

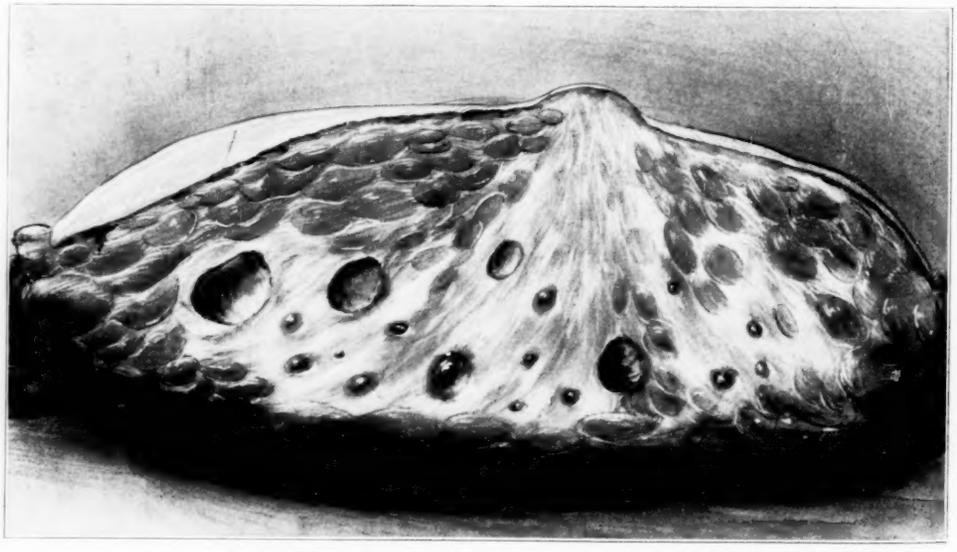

Fig. 8.—Abnormal involution ("chronic cystic disease," "chronic cystic mastitis"). Gross appearances.

2. Warren: International Text-Book of Surgery, second edition, vol. ii.

3. Warren: "American Text-Book of Pathology." "Pathology of the Breast."

4. Ribbert, H.: "Allgemeine Pathologie," Leipzig, 1901. F. C. W. Vogel.

the tumors of the fibrous group the fibrous tissue is the predominant feature of the tumor, epithelium being present, but playing only a subordinate part. In the epithelial group the fibrous tissue is present also, but merely in sufficient quantity to be regarded as a stroma, the growth of epithelium being the predominant feature of the tumor.

The term hyperplasia I have reserved for those diffuse changes which are characteristic of the breast at certain periods of its life history. From their very diffuse character, these can not properly be placed within the category of tumor formation. They cover not only that common condition which we find so characteristic a feature of the involution stage of the normal breast and which has passed under the many terms of "chronic cystic mastitis," "cystic disease of the breast," etc., but also that rare diffuse hyperplastic growth of all the elements of the gland at the period of highest physical development—"diffuse hypertrophy." The chronic inflammatory processes of the mammary gland present no special difficulties in classification; but they, as well as the non-indigenous tumors of the breast, are included in the table to round out the classification of all lesions, with the exception of acute mammary abscess.

TABLE I—CLASSIFICATION OF 758 CASES OF BREAST TUMOR.

	M.G.H.	Private Cases.	Total	Per Cent.
CARCINOMA	459	58	517	68
Fibro-Epithelial Tumors	.....	.....	(86)	(11)
(1) Fibrous type	.....	.....	(70)	(9)
1. Periductal fibroma	48	6	54	7
2. Periductal myxoma	10	2	12	1.6
3. Periductal sarcoma	4	0	4	.5
(2) Epithelial type (Cyst adenoma)	.....	.....	(16)	(2)
1. Fibro-cyst-adenoma	3	1	4	.5
2. Papillary cyst-adenoma	9	3	12	1.6
Hyperplasia				
1. Diffuse hypertrophy	2	0	2	.2
2. Abnormal involution (Cystic, (59) (Proliferative, 56)	87	28	115	15
Chronic Inflammation	.....	.....	(28)	(3.7)
1. Eczema of nipple	2	0	2	.2
2. Chronic abscess	5	0	5	.6
3. Ductal mastitis	3	0	3	.3
4. Tuberculosis	13	0	13	1.7
5. Single retention cyst	5	0	5	.6
Non-indigenous tumors	.....	.....	(9)	(1.2)
1. Sarcoma	4	0	4	.5
2. Lipoma	3	1	4	.5
3. Lymphangioma	1	0	1	.1
Supernumerary breast	.....	1	1	.1
	658	100	758	

The diagnosis of diseases of the breast is undoubtedly the first consideration, and it is for this reason that the cases of carcinoma have been included in the above list and must now receive a brief analysis.

Cancer occurred in 459, or 70 per cent., of all tumors in the hospital cases and in 58, or 58 per cent., of the cases in private practice. The proportion of cancer to other breast tumors was thus greater in hospital cases than in private practice. This is undoubtedly due to the fact that the milder cases of benign tumor are occasionally treated in the out-patient department of a hospital and, therefore, do not enter into this number of cases, whereas in private practice all cases are included. The fact, however, is obvious that cancer forms the great majority of actual growths of the breast, and if the conditions known as abnormal involution are left out of consideration this predominance of cancer over other tumors becomes even more conspicuous.

Paget's disease of the nipple occurred in this number of cases six times in connection with cancer of one or another variety; and eczema of the nipple and areola, similar in every way to Paget's disease, but without evidence of malignancy, was found in two additional cases during this ten-year period.[5]

The forms of cancer which have developed from other benign tumors or conditions of the breast are of special interest to us in this connection. During this period thirteen cases occurred in the hospital and

Fig. 9.—Abnormal involution. Microscopic appearances. Acinal type of epithelial proliferation.

four in the cases of private practice, in which cancer resulted from, or was present in connection with, benign diseases of the breast.

The involution changes of the breast are those which accompany or precede cancer more frequently than any other form of benign lesion, and by far the greatest

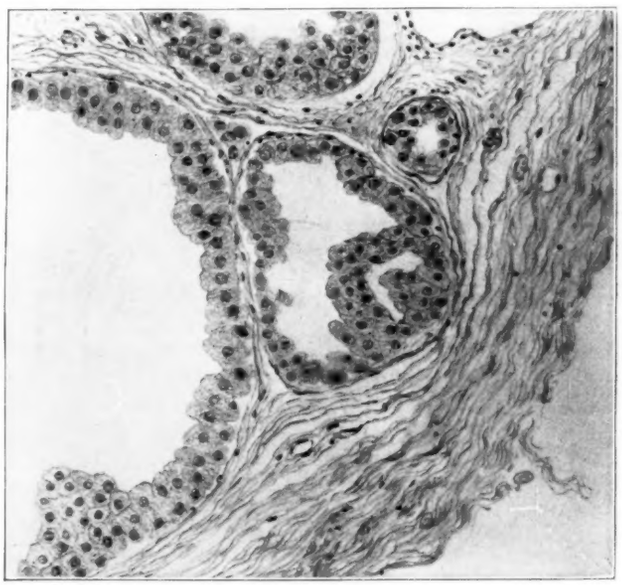

Fig. 10.—Abnormal involution. Microscopic appearances. Papillary and adenomatous types of epithelial proliferation.

number of cases of this character, show the picture of adeno-carcinoma. Nine cases of adeno-carcinoma and three of medullary carcinoma occurred with abnormal involution. Three cases of scirrhus cancer also occurred

5. Ehrhardt: Deut. Zeit. f. Chir, December, 1899, vol. liv, p. 130.

which presented the lesions of abnormal involution. In the hospital series also two cases of adeno-carcinoma occurred in connection with tumors of the papillary cyst-adenoma type. The significance of these cases of cancer will be especially considered under the discussion of the benign tumors of the breast.

The age incidence of the different tumors and diseases of the breast is a matter of considerable importance in diagnosis. I have arranged Table 2 to show the number and percentage of cases of the different lesions occurring in each decade of life.

TABLE II—INCIDENCE OF BREAST TUMORS BY AGE DECADES.

	No. of Cases.	10-20 Yrs.	20-30 Yrs.	30-40 Yrs.	40-50 Yrs.	50-60 Yrs.	60-70 Yrs.	70-80 Yrs.	80 Yrs.
Carcinoma	459	.....	6 12%	67 60%	151 70%	130 85%	80 92%	24 100%	1 100%
Periductal sarcoma	4	.....	.....	.....	1 .4%	3 2%	.....	.....	.....
Periductal myxoma	10	.....	5 10%	1 1%	3 1.5%	1 .6%	.....	.....	.....
Periductal fibroma	48	4 45%	26 50%	13 11%	4 2%	1 .6%	.....	.....	.....
Fibro-cyst-adenoma	3	.....	1 2%	2 2%	.....	.....	.....	.....	.....
Papillary cyst-adenoma	9	.....	.....	1 1%	3 1.5%	2 1%	3 3%	.....	.....
Diffuse hypertrophy	2	1 11%	.....	.....	1 .4%	.....	.....	.....	.....
Abnormal involution	87	.....	7 13%	20 18%	45 21%	13 8%	2 2%	.....	.....
Eczema of nipple	2	.....	.....	.....	.....	2 1%	.....	.....	.....
Chronic abscess and ductal mastitis	8	.....	2 4%	2 2%	3 1.5%	1 .6%	.....	.....	.....
Single retention cyst	5	.....	2 4%	1 1%	2 1%	.....	.....	.....	.....
Tuberculosis	13	3 33%	3 6%	3 3%	4 2%	.....	.....	.....	.....
Non-indigenous sarcoma	4	.....	.....	2 2%	1 .4%	.....	1 1%	.....	.....
Other non-indigenous tumors	4	1 11%	1 2%	.....	.....	1 .6%	1 1%	.....	.....
Total Cases	658	9	53	112	218	154	87	24	1

By this table it is to be seen that the proportion of cancer to other tumors of the breast is a constantly increasing one to the end of life. While between 20 and 30 years of age cancer occurs in only 6 per cent. of all cases, after 70 years the percentage is 100. All of the twenty-five tumors of the breast occurring in the Massachusetts General Hospital in ten years, in women who were over 70 years of age, were cancer.

The periductal fibromata, on the other hand, are most numerous in the third decade from 20 to 30, and constitute 50 per cent. of all tumors occurring at this period. From this time they gradually diminish in frequency until the sixth decade, after which they disappear.

Of the cyst-adenomata, we find that tumor (fibro-cyst-adenoma) which is most nearly related to the periductal fibromata, appearing in the same decades, the third and fourth, with the majority of the latter; while the papillary cyst-adenoma, beginning in the fourth decade, continues to the seventh, and therefore belongs to a distinctly later period of life.

Abnormal involution reaches high-water mark in the fifth decade, 40 to 50 years, with 21 per cent. of the tumors occurring in this period. This corresponds closely with the average age given for abnormal involution, which is from 42 to 45. The age incidence of other diseases is of less significance. The inflammatory processes, as might be expected, occur especially in the early decades, and tuberculosis, in this series of cases, appears to have affected the breasts of younger women than has generally been believed. The non-indigenous sarcomata of the breast, though few in number, occur rather in the middle period of life.

FIBRO-EPITHELIAL TUMORS.

The fibro-epithelial tumors now present themselves for consideration. These new growths of the breast have been described under so many different names that even an enumeration of all their titles is impossible. Before the middle of the last century all tumors of the breast were regarded as cancer. When Cruveilhier first recognized the existence of benign tumors of the breast a storm of opposition was raised in the French Academy of Medicine. Cruveilhier described a fibroma of the breast, but this name was not accepted, and a multitude of other names were used to describe the tumors of this character. Thus Johannes Müller

Fig. 11.—Abnormal involution and adeno-carcinoma. Microscopic appearances.

adopted the term of cysto-sarcoma-phyllodes; Brodie, sero-cystic sarcoma; Sir Astley Cooper, hydatid tumor. Billroth,[6] fibroma and cysto-sarcoma; Paget, chronic mammary and proliferous cysts. Adenocele, adeno-fibroma, fibro-adenoma, cyst-adenoma proliferum and intracanalicular-papillary-fibroma are all terms which have been used at one time or another to apply to fibrous tumors of the fibro-epithelial group. The reason for this diversity of nomenclature is readily found when the attempt is made to reduce the tumor to its component parts. In one case fibrous tissue predominates, but in another the glandular structures play a more important part. Ribbert[4] undoubtedly reaches the most satisfactory solution of this difficulty by grouping the tumors of this nature apart, not as fibroma or as adenoma, but as fibro-epithelial tumors partaking of the character of both tissues. One fact, however, is apparent in the consideration of these cases; and, although

6. Billroth: Deutsche Chirurgie, vol. xli, Krankheiten der Brustdrüse.

long ago pointed out by Billroth,[6] this fact has not received the attention of surgeons and pathologists which is its due. I refer to the fact that the chief constituent of the tumors of the fibrous type is the peculiar transparent periductal tissue of the female breast. This periductal tissue makes its appearance and develops during the period after puberty and before lactation, and it is at this period that the vast majority of tumors of the fibrous type occur. No one can deny that this periductal tissue is essentially a part of the glandular structure of the breast, and its close relation to the epithelium of the ducts and the interdependence of the two tissues makes it practically impossible for the one to undergo the changes of tumor formation without the other participating in the process to a greater or less extent. For these reasons I have recently adopted the term *"periductal fibroma"* as the most accurate name to apply to the tumors of this character, and this term

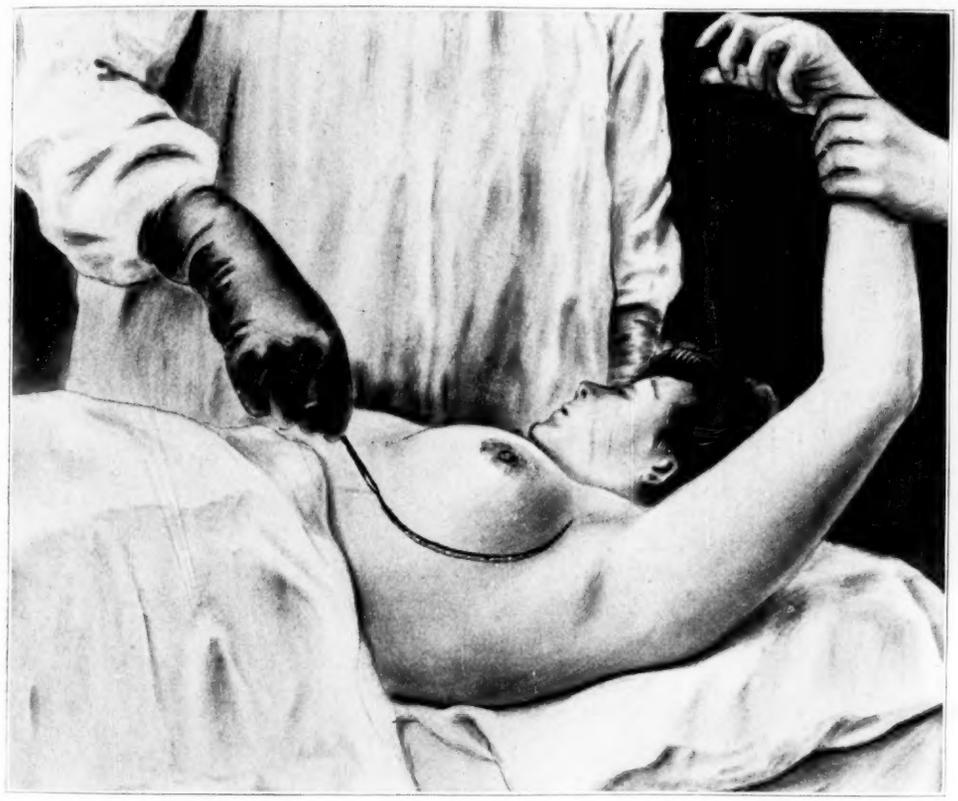

Fig. 12.—Plastic resection. Line of incision.

I venture to offer in the hope that the name "adeno" may be reserved for the tumors in which the epithelial elements play a more important part. Cystic dilatation of the ducts or of the characteristic clefts of the periductal fibroma may occur in certain instances, and is due in all probability to the obstruction of the pre-existing ducts. These cysts are thus secondary in character and of relatively secondary importance. The clinical characteristics of the more cystic forms of periductal fibroma are as little to be distinguished as their pathological ones, and although the attempt was made in this investigation to separate the cystic from the more solid tumors of this class, it was soon apparent that no data of value could be obtained. These tumors of the fibrous type may, however, be divided according to their richness in cells or the character of their fibrous tissue, into three groups, fibroma, myxoma, and sarcoma.

PERIDUCTAL FIBROMA.

Under this heading are included the true encapsulated fibro-epithelial tumors arising from the periductal fibrous tissue and composed chiefly of this tissue with a certain admixture of epithelial elements. Of this type of tumor there were forty-eight cases in the hospital series and six in private practice, 7 per cent. of the whole number of diseases of the breast. They varied greatly in size, from a bean to a cocoanut, and fifteen cases had multiple tumors in one or both breasts. The average size was about that of an English walnut. These tumors presented themselves clinically as hard nodules, freely movable in the breast tissue and under the skin. In gross appearance they presented firm, encapsulated tumors of a whitish, glistening appearance on section, and traversed by many cleft-like cavities, which were rarely distended to such an extent as to justify the term of cysts. Microscopically they showed a firm, fibrous capsule limiting them from the rest of the breast substance, but while some were composed of dense tissue, others were looser in arrangement, and some had even a myxomatous appearance which was attributable to edema.

The clinical features of tumors of this group could be summarized as follows:

The greater number occurred in women from 20 to 30 years of age. Unmarried women were most commonly affected. The tumors were of slow growth and painless, although in certain instances increased sensitiveness at the time of catamenia was recorded. The situation of the tumors in the breast was variable, but the upper outer quadrant was most commonly involved. Amputation was required three times on account of the size of the tumor; in the other cases excision or resection was the operation which was performed. Eight of the 48 cases showed cyst formation to a greater or less extent, but no clinical features served to distinguish them from the other cases. In one case the changes of abnormal involution were present in addition to the fibroma, and in one instance also carcinoma appeared to have originated in a tumor of this character.

PERIDUCTAL MYXOMA.

Ten cases occurred in the hospital series and two in private practice. The myxomata were obviously derived from the tumors of the periductal-fibrous group and differed from them only by their size, which was somewhat greater, and by the gross and microscopic appearance of myxomatous tissue on section of the tumor. It seems probable, as recorded by a number of other writers,[7, 8, 4] that the myxomatous character was

7. Schimmelbusch: Archiv für klin. Chirurgie, 1892, vol. xliv, pp. 117 and 102.

8. Schimmelbusch: Deutsche Gesellschaft für Chirurgie, 1890, p. 117.

due for the most part to the edema of the fibrous tissue which is characteristic of the periductal fibromata of the breast. These tumors occurred later in life than the fibromata and were of long duration. Rapid growth, however, was not unusual and the tumors were generally of large size. They were all hard in consistency. Necrosis and ulceration of the skin occurred in two cases, and enlarged axillary glands were sometimes found. Adhesion to the skin was present in one case in addition to the two which showed ulceration. The pathologic characteristics were those of a large lobulated, well encapsulated tumor showing cyst cavities or clefts, and a homogeneous transparent stroma. Except for their size it is obvious that these tumors differed in no marked essentials from the tumors of the fibroma class.

PERIDUCTAL SARCOMA.

Four cases of periductal sarcoma occurred in this entire series. These were tumors of the fibrous group with a stroma so cellular as to demand classification as sarcoma. All, however, presented the combination of cellular fibrous-tissue stroma and epithelial gland ducts. They were, as a rule, large, hard tumors, involving the whole breast, the size of a cocoanut or a child's head. They were lobulated and encapsulated, with a marked tendency to ulceration and to cyst formation. The skin above the tumors was, as a rule, reddened and contained dilated veins, but was not invariably adherent. Axillary glands, as a rule, were not involved. The tumors were of long duration and the patients of advanced age, 44, 51, 53 and 57 years. They were all married women. The growth of the tumor was slow at first, but in two cases had been more rapid within the last few months. Pain was insignificant. Amputation was done in every case.

Periductal sarcoma is thus seen to be merely an exaggeration of the periductal fibroma and myxoma, occurring somewhat later in life and preenting a tumor of greater size. Tumors of this nature, although generally described as sarcoma, have long been recognized to be of a very slight degree of malignancy. Schimmelbusch[7,8] has perhaps taken the most advanced position in this regard. The encapsulation and the absence of axillary or pulmonary metastasis would appear to support this contention, and it must be admitted that fibroma, myxoma and sarcoma are all tumors which are very closely related. It is unusual, in fact, to find a specimen of periductal sarcoma which does not show in some portions the characteristic picture of myxoma and of fibroma. The tendency to malignancy of the tumors of this group is only slight, and they cause disturbance principally of a local character. The danger of carcinoma is very remote. They cannot, however, be regarded as innocuous because of the limited tendency which they present to excessive growth and ulceration. For these reasons, operative removal is indicated. This may best be done in the small fibromata by the operation later to be described, under the term of "plastic resection of the mammary gland." The larger sarcomata and myxomata, however, require amputation. Although the determination of the end results of periductal sarcoma has not been worked out, a point not coming within the scope of this paper, my own experience has led me to estimate the tendency to recurrence after operation at a far lower figure than the 50 per cent. of Gross[9].

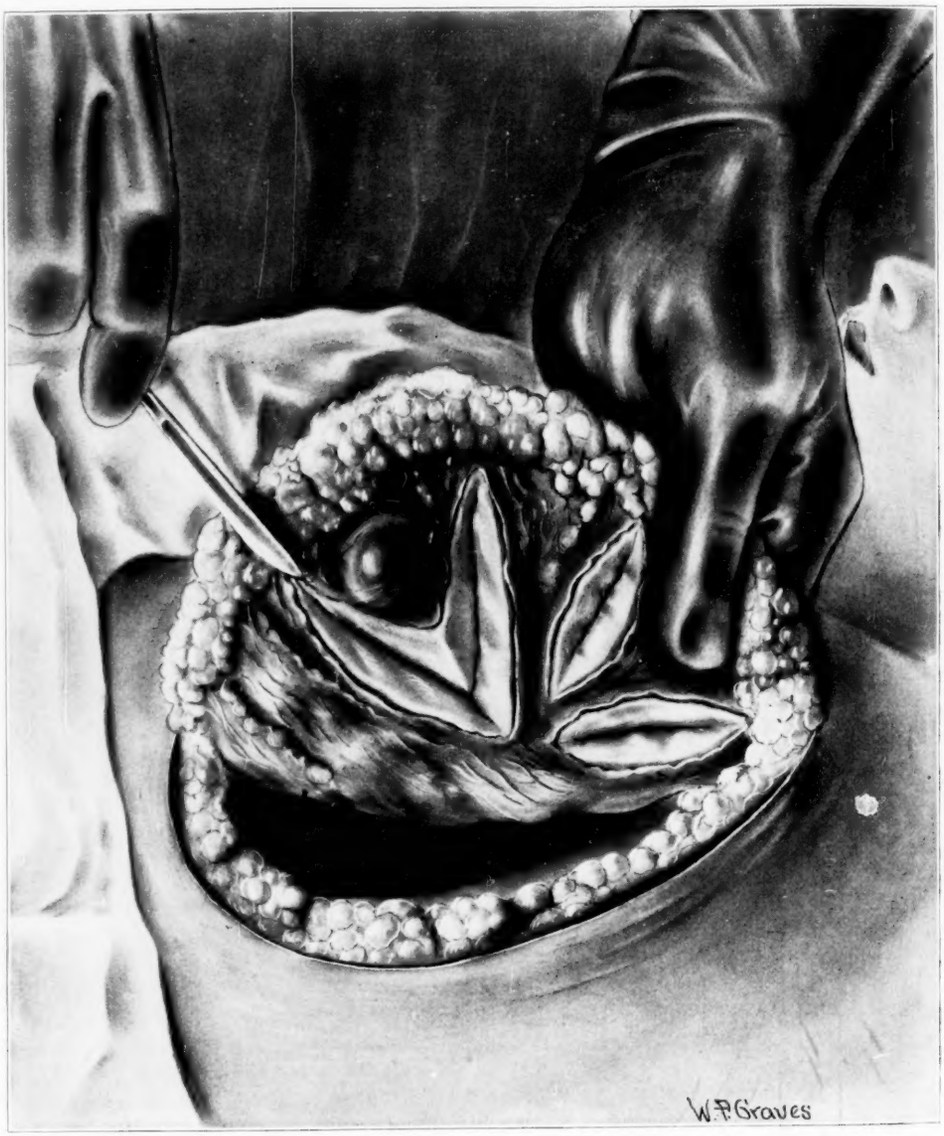

Fig. 13.—Plastic resection. Removal of wedge-shaped piece containing cysts. Radiating incisions in other lobules.

9. Gross, S. W.: American Jour. Med. Sci., July, 1887.

FIBRO-EPITHELIAL GROUP—EPITHELIAL TYPE—CYST-ADENOMA.

A certain number of tumors of the fibro-epithelial group present such marked epithelial changes as to merit description under another heading separate from the tumors of the periductal fibrous type. Tumors of this nature occur in two main classes; both of which, however, are much rarer than the tumors of the fibrous type. For these two classes I have adopted the names (1) *fibro-cyst adenoma,* and (2) *papillary cyst-adenoma.* The tendency to the formation of cysts in all inflammatory or neoplastic conditions of the mammary gland has been the cause of great confusion in nomenclature. A sharp line of differentiation, however, should be possible between a tumor of local unicentric growth and a diffuse process involving multiple areas in the gland or even the breast of the other side. For this reason I have seen fit to reject the term of "cyst-adenoma," for all but local new growths of a cystic character, the majority of which are tumors which come under the clinical classification the papillary type. Multiple diffuse cyst formation in the breast I prefer to class as abnormal involution, and under that heading I will go more at length into the nomenclature of other writers. The occurrence of cystic tumors among the periductal fibromata has already been remarked, and allusion was there made to their purely secondary character.

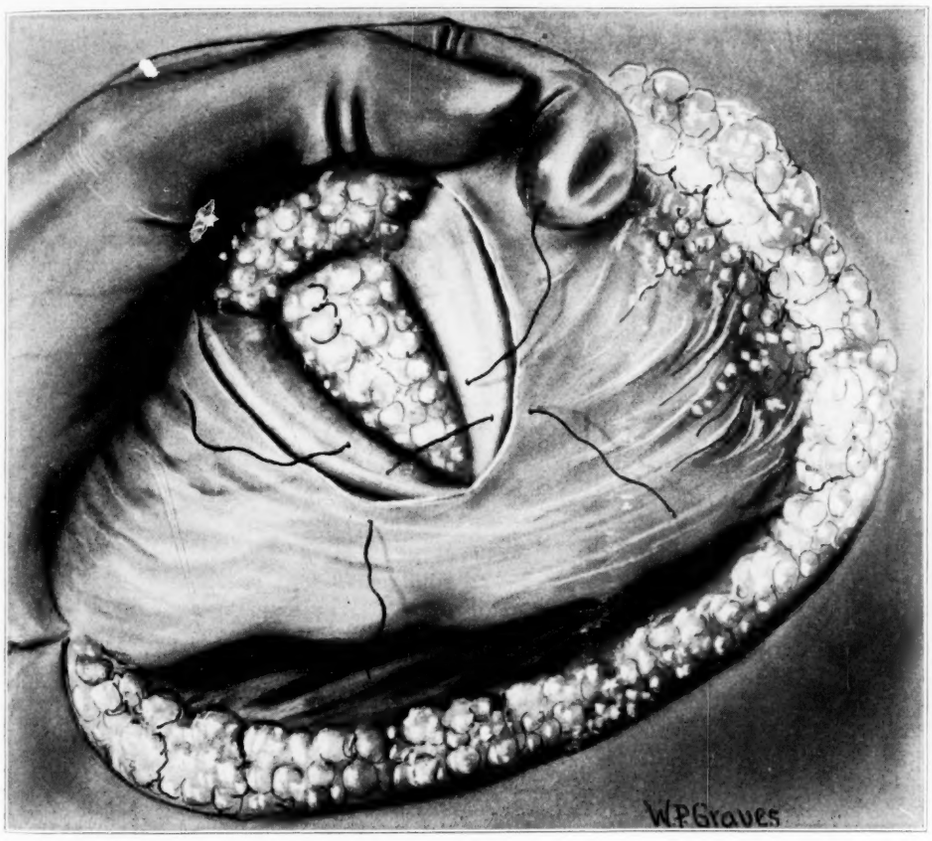

Fig. 14.—Plastic resection. Reconstruction of breast with buried sutures.

FIBRO-CYST-ADENOMA.

In four cases in this entire series secondary epithelial new growth occurred in a periductal fibrous tumor, producing a combination of lobular and cystic epithelial growth in a stroma of periductal tissue. To these tumors I have applied the name of "fibro-cyst-adenoma." They may be regarded as an epithelial exaggeration of the periductal fibroma and their anatomical structure differs from the fibroma only in the secondary proliferation of their epithelium. Tumors of this character have been described by other writers chiefly as adenomata, papillary cyst-adenomata, cysto-adenoma-proliferum, poly-cystoma, cystic fibroma, tubular-adenoma, etc. The characteristics of the fibro-cyst-adenomata were as follows. The size of the tumors varied from the size of a walnut to that of a fist. They were lobular and of hard consistency, and movable under the skin. They had in general the appearance of a periductal fibroma in which the epithelial lined slits greatly preponderate. The axillary glands were not enlarged and the nipples were not affected. On section these tumors presented a definite capsule and a lobular structure containing cysts of varying sizes. The cysts presented papillary outgrowths of connective tissue with a covering of epithelium. Microscopic examination showed marked proliferation in the epithelial cells lining the cyst cavity and covering the papillary outgrowths. The ducts appeared to be more involved in these tumors than the acini of the gland. All occurred in young single women, the average age being 32. They were tumors of slow growth and of long duration. Pain and discharge from the nipple were not recorded. All of these tumors were removed by excision without amputation of the breast.

The prognosis of tumors of the fibro-cyst-adenoma type must be regarded as entirely favorable, and removal of the tumor without amputation of the breast gives freedom from recurrence. It must be said, however, that the indication for operation in these tumors is even greater than in the fibromata, because of the epithelial proliferation which they present and the possibilities of its later development into carcinoma.

PAPILLARY CYST-ADENOMA.

The last group of tumors of the fibro-epithelial type comes under the heading of "papillary cyst-adenoma." These tumors are perhaps the most distinctive in clinical characteristics of any of the benign neoplasms of the breast. Nine cases occurred in the hospital series and three in private practice. They thus form the majority of the tumors which go to make up the epithelial division of the fibro-epithelial group. Tumors of this nature have been described by different writers under many headings. Gross,[10] in his classification in 1880, attempted to restrict to them the term "adenoma" or "true adenoma," with the intention of indicating

10. Gross, S. W.: Tumors of the Mammary Gland, New York, 1880.

the growth of glandular epithelium in the form of tubes and ducts which they present. The English writers[11, 12, 13] describe these tumors under the terms villous papilloma, duct papilloma, or by what, in the light of modern investigation, we must consider the misnomer "duct cancer." By German writers[14, 4, 15, 7, 16] they are commonly known as cyst-adenoma-papillare, poly-cystoma proliferum, intracanalicular cyst-adenoma, proliferating cyst-adenoma, or papillary cystoma.

To my mind the term papillary cyst-adenoma is the most satisfactory name for tumors of this variety. The histologic picture of a papillary or warty outgrowth is that of a connective tissue pedicle surmounted by an epithelial covering. Papillary structures of this character are the distinguishing feature of the tumors of this group and serve to differentiate them absolutely from other benign tumors of the breast. Tumors of this character rarely attain great size. Their consistency is hard, although fluctuation may occasionally be detected. Adherence to the skin and enlargement of the axillary glands are not to be expected. The situation of the tumor in the breast is generally beneath or in close relation to the nipple. On gross examination these tumors present the picture of a cyst cavity containing papillary or villous outgrowths from its wall. The fluid contents of the cyst is generally hemorrhagic. Microscopic section shows the characteristic papillary outgrowths of connective tissue surmounted by a luxuriant growth of epithelium. The epithelium in these cases presents the characteristics of ductal rather than acinal epithelial cells. The average age of the cases of tumors of this type was 52 years; and married women, especially those who have borne children and reared large families, appear to be especially predisposed. As a rule the tumors are of slow growth and of long duration. The most characteristic symptom, however, is the discharge of bloody fluid from the nipple, which occurs in the majority of cases.

Amputation was done in three cases of papillary cyst-adenoma and resection and excision in six. The absence of recurrence after operation is strong evidence in favor of the right of the tumor to a place in the category of benign neoplasms.

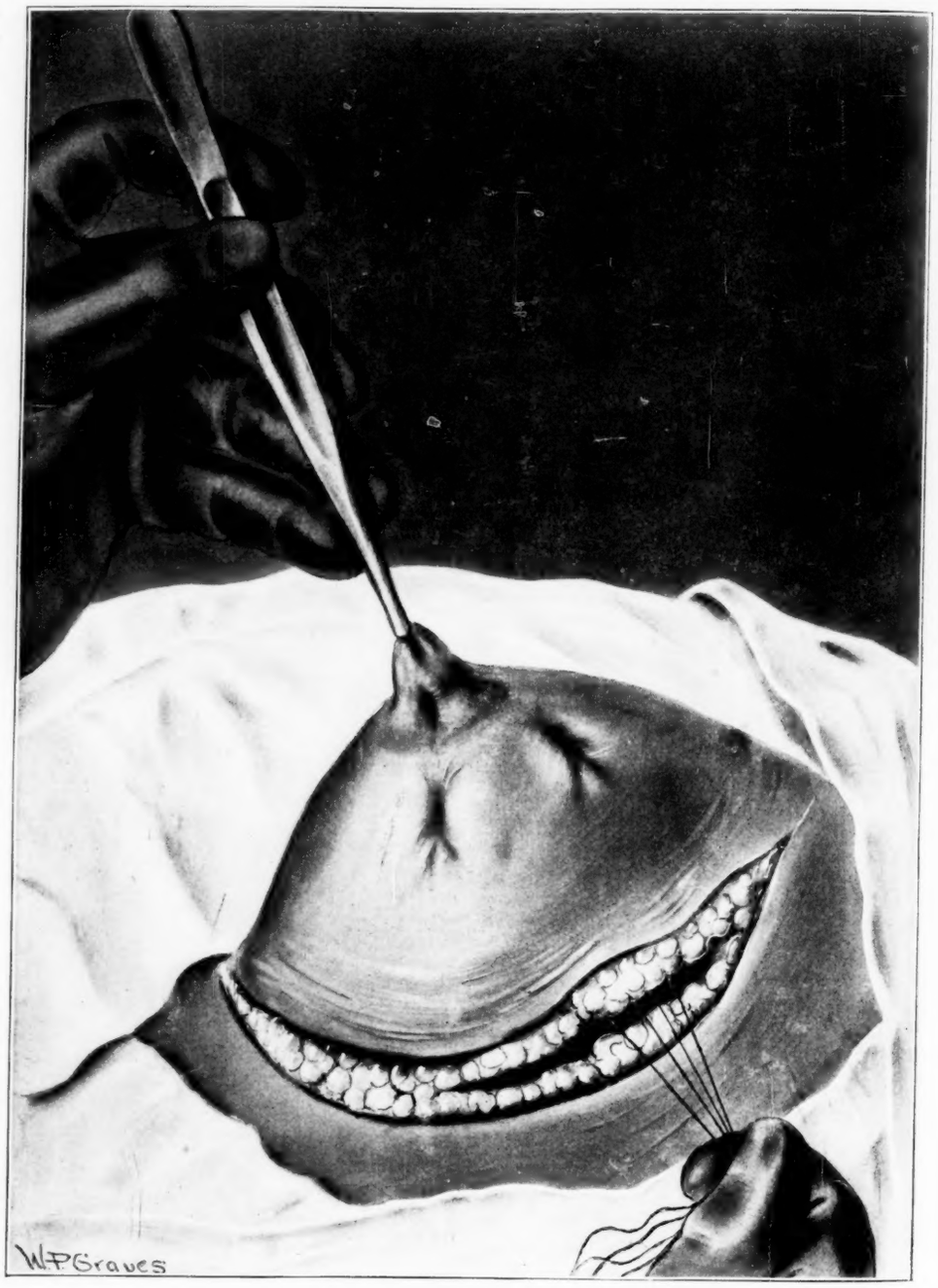

Fig. 15.—Plastic resection. Reconstruction of breast with buried suture. Eversion of nipple.

Papillary cyst-adenoma is thus seen to be a tumor occurring late in the life history of the breast, and one to which the functional activity of the gland in a certain measure predisposes. They are comparatively rare, but their significance must not be overlooked on that account, and it should be noted that although only nine cases occurred during this decade in the hospital

11. Bryant: "Diseases of the Breast." Cassel & Co., London, 1887.
12. Sheild. "Diseases of the Breast," London. McMillan & Co., 1898.
13. Williams: "Diseases of the Breast," London, 1894. John Bale & Sons.
14. v. Angerer: von Bergmann's, Bruns' and Mikulicz' Handbuch der Prakt. Chirurgie, vol. ii, p. 569.
15. Sasse: Archiv. für klin. Chirurgie, 1897, vol. liv, p. 1.

series, during that time two cases of cancer were found in which this disease was also present. In fact papillary cyst-adenoma has been thought to predispose to a special form of cancer, "adeno-carcinoma-destruens" (Tietze[16]), and this condition was present in both of the cases to which I have referred. The prognosis then of these tumors with early and complete removal is good. If not removed by operation, however, the danger of malignant sequelæ is very great.

HYPERPLASIA.

The term "hyperplasia" I have reserved in this classification for those processes in the breast which are of a diffuse character and for this reason to be sharply differentiated from the local unicentric process of actual tumor formation.

By hyperplasia is meant an increase in the fibrous and epithelial elements of the breast, affecting one or more lobules of the gland, and presenting the microscopic picture of an increase in the number of cell elements of both of the significant tissues, the fibrous stroma and the epithelium. Under this category two main divisions can be made: (1) "diffuse hypertrophy" of the breast, and (2) abnormal involution.

DIFFUSE HYPERTROPHY.

The so-called "diffuse hypertrophy" of the breast is a rare disease, but one which has received attention from many writers.[17] Two instances of this disease are included in the hospital series of cases, and fortunately the two cases serve to illustrate well the two main subvarieties of this condition.

One form of diffuse hypertrophy and perhaps the most common variety, is that which occurs in connection with pregnancy.

Of this form we have an example in the case of a woman of 43, who had undergone two miscarriages and who presented the abnormalities and diseases of the pelvic organs which have so frequently been noted in connection with this disease. Both breasts were affected and were uniformly enlarged. The consistency of the breasts was soft, but hard, stringy nodules could be detected on palpation. Microscopic examination showed the presence of fat, loose fibrous tissue and atrophied gland structures. There were no cysts nor discrete fibromata. The breasts gave trouble only from their size, and the pain was of an insignificant character; a double amputation was performed.

The other case serves to illustrate the condition as it appears in younger women. This occurred in an unmarried girl of 17, and involved the left breast only, which was enlarged to two or three times the size of the breast on the other side. The consistency of the breast was nodular and corded, and tenderness or "mastodynia" in this case was a marked feature. Irregularity of catamenia was noted, but no other abnormality of the pelvic organs could be determined. In this case no operation was done and a year and a half later, under palliative treatment by supporting bandages, the enlargement of the breast had partially subsided, and tenderness and mastodynia had diminished to a moderate extent.

ABNORMAL INVOLUTION.

The hyperplastic changes in the tissue of the mammary gland which accompany the process of involution have long been the subject of contention and controversy among pathologists and clinicians. The chief source of difficulty in the classification of the involution changes of the breast is undoubtedly to be attributed to the tendency which the gland exhibits to the formation of multiple cyst cavities. In all probability a moderate degree of dilatation of the ducts may be considered the normal condition of the breast at a certain stage of its decline, and only when these cysts and their surrounding stroma become so extensive as to attract attention by the induration which they produce, does the process attain a degree of abnormality sufficient to classify it as pathologic. Multiple cystic disease of the breast has long been recognized, and has been many times described under a multitude of different terms. Abernethy and Bell considered this a form of hydatid disease as did also Sir Astley Cooper. Brodie took the view that the cysts were caused by dilatation of the preexisting ducts, and the French surgeons of that time agreed in this interpretation. Paget believed that cysts were formed in the breast both by obstruction and by active new growth, and the German school of pathologists of that time were inclined to attribute the multiple cysts of the declining breast to an active new growth of the acinal epithelium, although Virchow was a believer

Fig. 16.—Empire bandage.

in the obstructive origin of mammary cyst formation. A new impetus was given to the study of this disease by Réclus,[18] who in 1860 attempted to show that the cysts were produced by an active new growth of the epithelium of the gland closely allied to carcinoma, and gave to it the name of intra-acinous cystic epithelioma. Later publications in 1887 called attention more specifically to the epithelial origin of these growths, and the disease became known in France as the "maladie de Réclus."

From the time of Réclus' later publications, many different theories have been advanced to explain the occurrence of multiple cysts in the involuting breast. These theories may be grouped into three main classes which may be briefly described as follows:

1. *Inflammatory Theory.*—The prevailing theory

16. Tietze: Deutsche Zeitschrift für Chirurgie, 1900, vol. lvi, p. 512.

17. Kirscheim: Archiv. für klin Chirurgie, 1902, vol. lxvii, 2, p. 582.

18. Reclus: Gazette des Hopitaux, July 7, 1887, p. 673.

among French[19, 20, 21] and English surgeons, [22, 23, 12, 13] and the view which has been vigorously supported by Koenig[24] and other German surgeons,[25] attributes the cyst formation to inflammatory origin, "chronic cyst mastitis." Whether this inflammatory process arises from infection of the ducts, as believed by the French writers, or whether it is of a more remote character is not determined. The chief points on which the theory is based are the evidences of chronic inflammation in the round-cell infiltration and thickened stroma of the gland, and in the clinical course of the disease, which is thought to be subject to repeated exacerbations. Koenig lays great stress upon the increased swelling and sensitiveness at the time of the catamenia.

2. *New-Growth Theory.*—The second theory, advanced originally by Schimmelbusch,[7] and supported by Sasse,[15] Maly,[26] and to a certain extent by Tietze,[16] attributes the process to an actual new-growth. This theory is widely accepted in Germany, and has obtained some support in other countries. Because of the supposed relation to tumor formation, the names of cyst-adenoma (Schimmelbusch[7]) polycystoma (Sasse[15]), or cystoma (Tietze[16]) have been proposed. It should be stated that Sasse and others attempt to distinguish the lesser degrees of this disease, under the name of "involution cyst," from the more advanced process of "poly-cystoma." The line, however, between the two conditions appears to be determined with the greatest difficulty.

3. *Involution Theory.*—A later theory, and the one which has been supported by the investigations which have been carried on in this country, rejects both the inflammatory and the neoplastic origin, and refers the proliferation of the breast epithelium to the abnormal conditions produced by involution. This is, in a measure, a return to the views of Réclus, who recognized the significance of the epithelial proliferation, but erred, in considering this the origin of the process.

Tietze[16] agrees that the disease is chiefly epithelial in character, and of a more diffuse distribution than would warrant the title of a tumor. Bloodgood[27] has recognized this fact in the name which he suggests of "senile atypical parenchymatous hypertrophy." Greenough and Hartwell[28] made a study of thirty cases of this disease in 1902. By these writers the chronic appearances of the stroma of chronic cystic disease of the breast are considered to be of secondary importance, whereas the diffuse character of the epithelial proliferation is thought to be evidence sufficient to prevent the interpretation of the process as an actual new-growth. According to their views, the connective tissue increase is attributed to the normal process of involution and atrophy which the breast gland shares during its declining stage, with other organs of the genital apparatus. Cystic changes of the ducts and acini are produced by obstruction from this thickened fibrous tissue. Up to this point the process may be considered physiologic. It has long been understood, however, that the epithelium of the breast gland is of notoriously unstable equilibrium, and the abnormal condition of cyst formation provides a stimulus which in about half the cases of this disease, as nearly as can be estimated, leads to secondary proliferation of the epithelium. Were we able to state at what point this epithelial proliferation would cease, no danger from this disease need be apprehended, but it has been determined by a number of different observers that in the proportion of about one case in ten this epithelial proliferation oversteps the bounds of hyperplasia into the territory of malignant new-growth. It is probably to these proliferative cases of abnormal involution that Sasse and Schimmelbusch would restrict the term poly-cystoma or cyst-adenoma, and it must be confessed that a certain number of advanced cases of abnormal involution can be distinguished with great difficulty from actual new-growth. It has seemed to me, however, to be safer to restrict the term "cyst-adenoma" to tumors of local origin and well determined outline, and to apply the general term of hyperplasia or abnormal involution to all of those diffuse processes which by their microscopical appearances are still within the pale of benign diseases of the breast.

The chronic interstitial mastitis of the English writers,[22, 23, 11, 12] chronic cirrhosing mastitis (Billroth[6]), maladie cystique de la mammelle or intra-acinous cystic epithelioma (Réclus[18]) maladie de Réclus,[10] maladie noneuse de la mammelle (Phocas[21]) chronic cystic mastitis, (Koenig[24]), periductal mastitis (Delbet[20]), polycystoma epitheliale (Sasse[15]), cyst-adenoma (Schimmelbusch[7]), plexiform fibroma (French[19] writers) chronic mastitis or diffuse fibro-adenoma (Wood[29]), cystic disease of the breast (Bryant[11]), and fibrous and glandular hyperplasia with retention cysts,—are but a few of the designations which have been applied to this disease. The last term, which was evolved by Dr. W. F. Whitney pathologist to the Massachusetts General Hospital, is probably the most correct and satisfactory appellation for this condition which could be devised, but suffers in being too unwieldy for practical use. For this reason I prefer the name of "abnormal involution."

Eighty-seven cases of abnormal involution appear in the hospital series and 28 in the cases from private practice. Of this total number 59 show lesions which are classified as cystic only, the remaining 56 presenting evidence of epithelial proliferation. A certain amount of fibrous tissue increase with more or less round-cell infiltration is characteristic of involution of the breast under any circumstances.

The changes which have been classed as cystic are those presented by breasts in which this fibrous thickening has produced dilatation of the ducts alone without obvious changes in the character of the epithelium. The proliferative group are those which are characterized in addition by proliferative changes in the epithelium of the cysts or acini.

Of the proliferative group, three subdivisions have been distinguished according to the character or degree of the epithelial growth. (1) Proliferation of the acini, (2) papillary outgrowths of epithelium into cysts, and (3) adenomatous proliferation of epithelium. The significance of these three groups will appear in the discussion of their special characteristics. The gross appearances of cases of abnormal involution may be summarized as follows: A considerable proportion of

19. Binaud and Braquehaye: Dentu and Delbet's Traité de Chirurgie, Paris, 1899, vol. vii.
20. Delbet: Bull de Soc. d'Anat. de Paris, January, 1893, Paris.
21. Phocas: Report of Fourteenth French Congress of Surgeons, Paris, 1901, p. 470.
22. Banks: Lancet, 1900-01, p. 843, and 1902-01, p. 309.
23. Paul: Transact. London Pathological Soc., 1901, vol. lii, p. 30.
24. Koenig, F.: Lehrbuch der Speciellen Chirurgie. (Sixth edition.) Vol. ii, Hirschwald, 1893, Berlin: Centralblatt für Chirurgie, 1893, vol. xx, p. 49.
25. Roloff: Deutsche Zeitschrift für Chirurgie, 1899, vol. liv, p. 106.
26. Maly: Zeitschrift für Heilkunde, 1898, xix, p. 355.
27. Bloodgood: Jour. Amer. Med. Assoc., Aug. 6, 1904, p. 367.
28. Greenough & Hartwell: Journal Medical Research, 1903, vol. ix, No. 4, p. 146.
29. Curtis & Wood: Medical News, New York, Aug. 13, 1904, p. 294.

the cases are diffuse in character, while others present local indurations of the breast tissue of varying size and situation. The consistency of this induration is hard or nodular, although softer and even fluctuating areas are occasionally noted. It would seem, however, that a cyst to be appreciated with certainty by its elastic feeling or fluctuation must attain considerable size. Pain and tenderness are present in about half of the cases, and although not diagnostic this symptom must be considered of significance in view of the generally painless character of carcinoma. Axillary glands are detected in only a small proportion of the cases. It has been my impression, based on clinical experience, that inversion of the nipple is a frequent accompaniment of abnormal involution, and it may certainly be stated that previous diseases or abnormalities of the breast, such lesions especially as interfere with the normal function of the gland, are predisposing factors in the origin of this disease.

On gross examination these specimens show fibrous induration of the breast gland with the presence of multiple cystic cavities containing fluid varying from a clear serum, through all the shades of brown and green and black. The process is diffuse in the vast majority of cases, although one lobule of the gland is often noted as the situation in which the disease is most advanced. Under microscopic examination fibrous hyperplasia and secondary involvement of the gland structures with cyst formation is observed.

The majority of cases occurred between 40 and 50 years of age. Married women were apparently the more susceptible to the disease. The duration was a matter of considerable variation, and the rate of growth was generally slow. Trauma was apparently of comparatively little etiologic importance. In this series of cases the relation between exacerbations of the disease and the catamenial period was conspicuous by its absence, only four cases having stated that the induration was influenced in its sensitiveness or in size by the monthly period. Discharge from the nipple was noted in fourteen cases, and was relatively more frequent among the proliferative than among the purely cystic types of involution. The character of the discharge varied from yellow serum and watery or milky fluids to brownish and bloody fluid and even pus. Of the fourteen cases, however, which showed a discharge from the nipple, seven presented tumors immediately beneath the nipple, and it is probable that discharge from the nipple will be found to depend more on the situation of the cyst than on the character of the epithelial changes within its wall. The right breast was involved in 27 cases, the left in 42, and both breasts in 17. The tendency to the involvement of both breasts in this disease is worthy of remark. So far as the situation of the induration in the breast tissue is concerned, the outer and upper hemispheres appear to be the seats of predilection; and the upper and outer quadrant, as in almost all diseases of the breast, is the region most commonly affected. Diffuse induration involving the whole breast occurred in 14 cases. Operation was performed in 86 of these 87 cases. In 41 the entire breast was amputated. In 45 an excision or resection of the breast was done after the method later to be detailed.

The subclassification of the cases of the proliferative type is of interest only from a histologic point of view, and can be determined only by microscopic examination.

The 36 hospital cases which presented proliferation were subdivided as follows: Ten showed an apparent increase in the number of the gland acini, when compared with normal breasts of the same age, and conditions of marriage, childbirth and lactation. This increase in the number of acini was accompanied in the majority of instances by a proliferation of the epithelium to such an extent that thickened or even solid columns of cells were produced, retaining, however, the characteristic formation of the gland ducts, and presenting no infiltration beyond the basement membrane. The significance of this form of proliferation could not be determined from the cases which were available for examination. But it is not improbable that it may ultimately lead to carcinoma. In support of this assertion one case of scirrhus cancer occurred in the hospital series and two in private practice, in which abnormal involution of the acinal type was also present. The clinical characteristics of cases of acinal proliferation were not to be distinguished from those of other types of abnormal involution.

Another class of epithelial proliferation in abnormal involution is to be described under the term of papillary proliferation. This group again is one of only histologic significance. By this term is meant a growth of epithelium in cyst cavities of such a nature that the epithelial cells are heaped up and project into the cavity, without a connective tissue pedicle or support. The microscopic picture of this papillary projection suggests strongly that more epithelium is produced in the lining of the cyst wall than can be accommodated on the basement membrane, with the result that certain portions are forced out toward the center of the cavity. There were 18 cases of abnormal involution which presented this form of proliferation. Of this class, again, the clinical characteristics are not to be distinguished from those of other forms of abnormal involution.

The third and last type of epithelial proliferation which is to be distinguished is that to which Tietze[16] and Greenough and Hartwell[28] have applied to the name of "adenomatous" proliferation. Adenomatous proliferation occurs only in cases in which papillary outgrowths are already present, and must be regarded as a somewhat more advanced type of epithelial growth. In these cases the papillary outgrowths from different portions of the cyst wall appear to meet and fuse together, and the resulting microscopic picture is that of a space filled with epithelial cells in which here and there an open gland lumen is observed. This form of proliferation occurred in eight of the hospital cases and in four of the cases from private practice.

Adenomatous proliferation derives its greatest interest, however, from the fact that it is chiefly in its presence that we find the combination of involution and carcinoma. During the ten years in which the 12 cases of adenomatous proliferation have been collected, 517 cases of cancer have come under observation. Of this number there were 15 which presented the lesions of abnormal involution and carcinoma. Three of these cases showed scirrhus carcinoma in connection with abnormal involution of the acinal type of proliferation. These have already been considered. Of the remaining 12 cases, 9 showed adenocarcinoma with involution changes of the papillary and adenomatous character. In the three other cases medullary carcinoma of a more advanced type was recorded in the pathologic report. Thus during the collection of 115 cases of abnormal involution 15 cases of this disease in combination with carcinoma were obtained, or 13 per cent. This figure is somewhat greater than the 10 per cent, which has been found by Tietze,[16] Greenough and Hartwell,[15] and others; but may be considered as very closely approximating the actual condition.

Attention must again be called to the fact that the clinical symptoms of these proliferative types of abnormal involution are to be distinguished in no way from those of simple abnormal involution, and by no sign on physical examination can the degree of epithelial growth be determined. Microscopic examination is therefore absolutely necessary for the correct classification of the individual case, and in fact the variation between the different portions of the same gland is so great that microscopic examination of all of the tissues is necessary to a correct diagnosis.[30] For these reasons and because of the

30. The prognosis of a given case of abnormal involution untreated is a matter of some uncertainty. Spontaneous rupture or discharge of the cyst through the nipple may rarely occur, and the entire process subside for a time, or indeed, forever. Suppuration of the cyst is occasionally observed. More often the disease becomes stationary at a certain stage of its development or advances slowly involving more and more of the gland and the breast of the opposite side. Carcinoma develops in something more than 10 per cent of all cases.

liability to carcinoma which these cases present, I have no hesitation in recommending operative treatment for abnormal involution in every case. An induration in the breast gland at or about the time of the menopause which is palpable with the flat of the hand against the chest wall I consider sufficient indication for operation.

For cases of this character I perform "plastic resection of the mammary gland," by means of which a thorough exploration of the gland may be obtained and portions of a suspicious nature may be removed for microscopic investigation without the mutilation of an amputation. This operation I would recommend for every case of abnormal involution in which the diagnosis can be established.

CHRONIC INFLAMMATORY DISEASES.

The chronic inflammatory diseases of the breast are divisible into two main classes, those occurring in connection with lactation, and those produced by specific inflammatory diseases such as tuberculosis. It is to these diseases of the breast that the much abused term "chronic mastitis" should really be applied, but this term has been so loosely employed that its use in any way is at present inadvisable. In addition to the two main classes detailed above, I have ventured to place in the category of chronic inflammation two cases of non-malignant eczema of the nipple, and five cases of single retention cyst of mechanic origin. It is to be regretted that no case of syphilis or actinomycosis entered the hospital during this decade, as it is under this heading that these diseases should be classified.

There were eight cases of chronic lactation mastitis and thirteen of tuberculosis in the hospital series. Chronic lactation mastitis has been again subdivided into five cases of chronic abscess and three of inflammation of the ducts (ductal mastitis). The cases of ductal mastitis show multiple small abscesses and necrotic foci distributed through the breast gland in close relation with the larger ducts. Clinically they present tender indurated masses in the breast. The mass may be adherent to the skin, and enlarged axillary glands may be present. Microscopically these breasts show an increased amount of fibrous tissue with small yellowish foci of necrosis and abscess cavities, while the tissue about the ducts is infiltrated with great numbers of small round cells and leucocytes. The disease especially affects young women, and may be attributed to infection of the ducts during the process of lactation. The chief clinical characteristics are diffuse induration of the breast occurring shortly after lactation, with a tendency to involvement of the skin and more pain and tenderness than would be expected with a tumor. In two of our cases the breast was amputated, and in one the affected lobule was excised.

CHRONIC ABSCESS.

Five cases of chronic or subacute abscess of the breast occurred during the decade. All presented a tumor or nodular induration of the breast of varying size, and in only one case was fluctuation to be detected. Tenderness, adherence to the skin and enlargement of the axillary glands were occasionally noted. The pathologic examination showed one or more abscess cavities of varying size, and microscopic examination showed excessive infiltration of the gland tissue with leucocytes and round cells. The patients were all young adults. All were married, and four had had children, but one had never been able to nurse her child. Two gave a history of previous acute breast abscess. The abscesses were, as a rule, of slow development, and pain was not a pronounced symptom. In two cases old discharging sinuses from previous acute abscesses were still present. In three cases incisions with drainage were made; in one case the breast was amputated, and in one the affected lobule was excised.

GALACTOCELE.

One of the cases of chronic abscess presented, in addition to the abscess, the picture of a retention cyst in a breast which was in active lactation. This condition has been repeatedly described under the name of galactocele, but its occurrence is comparatively infrequent, as may be seen from the fact that but one instance occurred in our total of 758 cases. The symptoms of galatocele do not differ appreciably from those of single retention cysts, except that the condition occurs in a breast which is yet, or has been recently, in active lactation. Under these circumstances the contents of the cyst is of a milky rather than of a serous character, because of the milk-secreting function of the cells which line the cyst at this period of the breast's development.

TUBERCULOSIS.

In this division are included the thirteen cases of chronic disease of the breast produced by the tubercle bacilli. Indurated masses of varying size were produced in the breast of irregular outline and varying consistency. Tenderness and fluctuation were present in most of the cases. The tendency to involvement of the skin was marked, and in seven cases there were discharging sinuses present at the time of operation. Enlargement of the axillary glands was generally noted. Tuberculosis of other organs was present in only three cases. Microscopic examination of the specimens showed the characteristic tubercular tissue with cheesy foci of necrosis and the typical histologic peculiarities of tuberculosis.

The average age was 30 years, and in three cases the patients were under 20 years of age, although the disease was well distributed through the decades of adult life. Married women who had borne children appeared to be the most susceptible, and in two cases acute abscess had occurred during a previous lactation. The average duration was nine months and the development of the disease was of a chronic character. Pain was absent in about half the cases. Both breasts were involved in only one case; and the upper and outer quadrant was again the seat of predilection. In seven cases the breast was amuptated, in four a portion was excised, and in two the abscess was simply opened and drained. The immediate result in all of these cases was satisfactory.

SINGLE RETENTION CYST.

Five cases occurred in the hospital series which presented the characteristics of a single cyst, of varying size, with no abnormality of the surrounding tissues. These cases have been separated from those of abnormal involution because of their purely local character and the absence of pathologic changes in the breast tissue in their immediate vicinity. It is not to be denied that a certain number may belong properly among those of abnormal involution, and that a more extensive examination might have given data which would justify their inclusion among the latter class. In the absence of these data, however it has seemed wiser to place the single retention cysts in a separate class. Cysts of this character have been described under the name of "evolution" cysts by Gross.[10] They differ in

no way from the simple cysts produced in other glandular structures by accidental occlusion of a duct. We are especially familiar with cysts of this type in the epididymis and the salivary glands. Occlusion of a duct may be due to any one of a number of different causes; congenital defects, trauma, and the scars of transient inflammatory processes of the nipple or in the substance of the gland, being perhaps most frequently observed. Operations on the breast for small fibromata are not infrequently followed by cicatricial obstruction of the ducts.

The five cases here presented varied from 21 to 49 years of age—three were single and two married women. The duration was comparatively short (an average of about two months) and development was rapid; there was no pain or tenderness as a rule, and the clinical appearances were those of a single, painless, elastic, fluctuating tumor, varying in size from a walnut to a hen's egg, and of uniform and rapid growth. The axillary glands were not enlarged. Excision was done in every case, and a single thin-walled cyst removed without other abnormality of the gland. The fluid contained in these cysts varied from clear serum to a fluid of yellowish brown color—with more or less turbidity. The significance of a single retention cyst in the breast must be considered very slight, and their chief interest and importance lies in the difficulty in distinguishing them from the multiple cysts of abnormal involution. Because of this difficulty, exploration and excision are to be advised.

NON-INDIGENOUS TUMORS OF THE BREAST.

A certain number of tumors of the breast occur which are situated in that organ only accidentally, as it were, and have no special relation to the mammary gland as regards their origin. Among these tumors I have classed the sarcomata which were derived, not from the periductal tissue, but from other sources, and which presented no evidence of inclusion of the glandular elements of the breast. Two of these tumors were classified as fibro-sarcoma, one was of mixed cells and one of spindle cells. All were much smaller in size than the periductal sarcomata, and all appeared to involve the breast gland before removal. The tendency to the involvement of the skin in these tumors was marked, two being actually ulcerated and one other showing marked adherence and brownish discoloration. The ages varied widely, from 33 to 70 years. All were in married women. The duration varied from 6 months to 10 years. Two were of slow growth and two more rapid within the last few months. Discharge from the nipple was not noted and the axillary glands were found enlarged in only one case. Pain was generally present. Amputation was done in three cases and extensive excision in the fourth. The origin of these tumors appeared to be from the connective tissues forming the stroma of the mammary gland. The essential anatomic elements of the mammary gland were merely displaced by their growth, and they differ in no respect from sarcoma of a similar character arising in other organs. Their size was smaller than the periductal sarcoma, but with this exception the two forms were with difficulty to be distinguished.

The other non-indigenous tumors of the breast were lipoma and lymphangioma. Three cases of lipoma occurred in the hospital series and one in private practice. They were freely movable and not tender. No enlargement of the glands or abnormality of the nipple could be detected. They were multiple in one case. The ages of the patients varied from 20 to 66 years. the duration of the tumors from three to 20 years. They were of slow growth and occasioned no objective symptoms. All of the cases were operated on, excision being done in two and amputation in a third.

A single case of lymphangioma occurred during this decade. This was a cavernous lymphangioma in a girl of 16, which started in the axilla and involved the breast only by secondary extension. It was of six years' duration. Examination showed a dense fluctuating tumor the size of a man's head occupying the position of the breast, but being situated behind the gland and extending from there to the axilla and into the neck. The whole mass was removed without amputation of the breast and the patient made a good recovery.

SUPERNUMERARY BREAST.

One instance of this condition is included in the series of cases from private practice, and another was accidentally discovered in one of the hospital cases of periductal fibroma. Both occupied a situation at the anterior margin of the axilla; and this appears to be the most common site, although supernumerary breasts in other situations along the so-called "milk-line" from the axilla to the groin, are occasionally reported (Young[31]).

Both cases presented a small collection of glandular tissue without a nipple. No symptoms were produced in either case, and in one the tumor was discovered only in routine physical examination. In the other anxiety was aroused by the presence of the axillary tumor, but was promptly relieved when the correct diagnosis was ascertained.

In neither of these cases was there any evidence in support of the theory that supernumerary breasts are more prone to tumor formation than breasts in a normal condition; and indeed this theory is probably one of those which have been handed down from writer to writer without satisfactory evidence for its support (Martin[32]). The rarity of cases of supernumerary breast (only two occurring in 758 cases) is the probable explanation of this uncertainty in the matter of prognosis.

PLASTIC RESECTION OF THE MAMMARY GLAND.

As Stewart[33] justly says, there is a lamentable and unnecessary difference of opinion as to the treatment of doubtful tumors of the breast.

Many of the tumors are situated in such portion of the gland as to involve disfiguring scars in a conspicuous locality if an incision is made directly over the tumor. Many operations designed for benign tumors involve an amputation of the breast. This unfortunate organ has suffered countless mutilations in times past in conformity with prevailing customs. Thomas[34] first sought to overcome this difficulty by proposing an incision along the lower and outer border of the breast, but details as to his technic are wanting in the original article, and the method does not seem to have been generally adopted.

In the treatment of cysts Abbé[35] has advocated an exploratory puncture, and gives a large number of permanent cures effected by simply evacuating the cyst. McGraw[36] has also written upon the treatment of cysts by aspiration, and in the main agrees with Abbé, although he notes two cases in which he observed the

31. Young, E. B.: Boston Medical and Surgical Journal, vol. cl, p. 319, 1904.
32. Martin, E.: Archiv. für klin, Chirurgie, 1893, vol. xlv, p. 886.
33. Stewart, J. Clark: THE JOURNAL A. M. A., Aug. 6, 1904, p. 365.
34. Thomas: New York Medical Journal, 1882.
35. Abbé: Medical Record, New York, Aug. 15, 1903.
36. McGraw: American Medicine, July 25, 1903, p. 142.

development of cancer after this procedure. Bull[37] also has long been an advocate of aspiration of cysts, and had no cases of cancer following aspiration in his own experience. McGraw's two cases, however, are excellent concrete examples of the theoretical dangers of aspiration.

At one time I was in the habit of using exploratory puncture to determine the nature of a doubtful growth, and for this purpose used a Mixter punch (a long steel cylinder of small caliber with a handle at one end and sharp edges at the other). Richardson, however, later reported cases in which an extension of the cancerous process was observed along the line of puncture; and although I have succeeded in curing many a cyst by puncture, I have abandoned it as routine practice. In doubtful cases it may cause serious displacement of cancer cells; in cases of cystic disease it disposes only of the larger cysts. I should still use the method, however, in exceptional cases, such as in the presence of a large cyst near the nipple in a small breast which could be easily palpated.

Herbert Snow[38] has recently recommended removal of cystic tumors of the breast by forcible massage. Cysts can undoubtedly be ruptured in this way and permanently cured, but it is not a method of precision, and would be most dangerous advice for general adoption.

Stewart[33] advises an exploratory procedure so planned as to avoid contact of cut lymphatics with any tissues left behind, and any chance of dissemination of cancer cells by pressure before the removal of the breast.

Bloodgood[27] agrees in advising exploratory incision, and states that this operation is the routine treatment of doubtful tumors at the Johns Hopkins Hospital. Curtis[29] and Morris[39] support this recommendation and Morris calls attention to the ease with which consent may be obtained for an exploratory operation early in the course of the disease, when the possibility of avoidance of a total amputation can be urged.[40]

The operation which I have gradually elaborated, starting with the so-called Thomas incision, consists in the removal of a V-shaped portion of the gland containing the cyst or tumor, and exploratory radiating incisions in the remainder of the gland. In the early operations I undertook to remove all sections of the gland involved in cystic changes, and in several cases this resulted in removal either of the entire gland or of all but fragments here and there of the cortical portion. These fragments were brought together with catgut sutures placed at certain points, or by a single purse-string suture, so that in the breasts of women possessed of a fair amount of adipose tissue the organ could be reconstructed and the nipple (which previously perhaps had been inverted) could be restored to its normal shape. In this way the outward shape and appearance of the breast could be maintained while the entire mammary gland had been removed. Further experience, however, showed me that this radical measure was in the great majority of cases unnecessary. The details of the operation as I now perform it are as follows:

The preliminary incision is longer than that contemplated by Thomas, and, starting at the lower border of the breast, opposite the middle of the outer arc of the lower inner quadrant, it runs along the lower fold and outer margin to the inner border of the axilla, thus severing the lymphatic connections of the breast with the axillary plexus of lymph glands. The incision should be carried down to the lower border of the pectoralis major muscle, which should be freely exposed. The dissection is then carried along through the loose connective tissue which lies between the pectoral fascia and the posterior layer of the fascia in which the mammary gland lies. With the left hand the operator reflects the breast upward and inward so that the posterior surface of the gland becomes exposed in its entire length. The gland tissue can now be seen through the transparent fascia and easily inspected. If cysts are present they are readily observed, as the majority of them lie in the posterior portions of the gland. Usually there are one or two large cysts lying in the same quadrant. This portion can be removed by a V-shaped incision without opening the cysts. The apex of the V lies directly under the nipple in the central portion of the gland. Radiating from this point incisions can be carried into the gland tissue in all directions, exposing and bisecting all small cysts so that no cyst, however small, remains that has not been laid open by the knife. A second V incision may occasionally be necessary, but this is rarely the case. The next step of the operation, after arresting hemorrhage from the larger vessels, is to close the V-shaped opening with two rows of catgut sutures, one along its anterior borders, and one bringing its posterior edges into contact. The gland is now released from the hand of the operator and dropped back on to the pectoral muscle, and it will be found that the various incised portions of the gland resume their natural positions and fit accurately together. A few sutures may be needed to arrest hemorrhage from small arteries in the gland substance, but this is not usually necessary. The gland should next be anchored to the subjacent pectoral muscle at its outer edge, and still another row of sutures is advisable to hold together the deep layers of the superficial fascia before closing the outer edges of the wound with silkworm gut. The buried sutures are useful in removing strain from the surface suture.

The dressing should be applied so as to produce lateral compression of the two hemispheres, as the ordinary swathe tends to tear the buried gland sutures apart. I have devised for this purpose a bandage which crosses in front and is pinned like a diaper; the ends of each half are then caught into two loops which are attached to suspenders crossing over the shoulders (empire bandage). This bandage can be elaborated into a breast supporter, which is made for me by Messrs. Leach & Greene of Boston. If the breast operated on contains a benign tumor, the tumor can be removed by the V-shaped incision, the double suturing of the gland incision being carried out as before. I have found it better to make a clean V cut even in the cases of the periductal fibromata, as I have always found the capsule of these tumors more closely adherent to the gland tissue than is usually represented to be the case.

In case of exploratory operations for cancer the incision can be carried a little farther from the gland border if necessary and sufficiently deep to sever all lymphatic connections with the axillary lymphatics or those which run through the pectoral muscle. The incision into the posterior surface of the gland, if cancer

37. Bull: Medical Record, New York, 1899, No. 16, p. 557.
38. Snow: British Medical Journal, Oct. 17, 1903.
39. Morris: THE JOURNAL A. M. A., Aug. 6, 1904, p. 368.
40. Other references which may be consulted on the general subject are as follows: Clopton: Inter-State Medical Journal, June, 1904. Dreyfus: Virchow's Archiv, vol. cxiii, p. 535. Ellis: Annals of Surgery, September, 1903. Renton: British Medical Journal, April, 1903. Warren: Annals of Surgery, December, 1904.

be found, should be closed by a single suture before proceeding with the major operation.

I have called this operation plastic resection of the mammary gland, as the incision and subsequent sutures are devised with special reference to restoring the gland as nearly as possible to its normal shape and to improve often the outward appearance of the nipple. In case of inversion of the nipple as is often seen in abnormal involution, the gland tissue should be so laid open from behind that a subcutaneous purse-string suture can be placed around the base of the nipple and force it outward.

I have performed plastic resection of the gland in 66 cases, in 8 of which both breasts were operated on, so that I have performed the operation in all 74 times. The great majority of these operations were for abnormal involution, but in no case have I had any recurrence of cyst formation. It is remarkable how completely all trace of the incisions into the gland tissue disappears. It is usually difficult to tell from the feel, only a few months after the operation, what portion of the gland has been resected. As the outward cicatrix is practically invisible to the patient, the result from a cosmetic point of view is also most satisfactory. In three cases only have I found suppuration of the gland to take place, and this was attributed to infection from the cavity of the cyst. One was a case of large multiple cysts; another was a large cyst near the nipple; and the third was a case of papillary cystadenoma near the nipple in an old woman. I have tested many exposed cysts for bacteria, but have invariably obtained negative results. I should, however, advise the operator to avoid opening the larger cysts if possible, and to use catgut for deep ligatures and sutures, as they are quickly absorbed and leave no trace of their presence in the sensitive structure of the gland. I have had stitch abscess in the skin sutures in two cases only, neither of which was in private practice.

As will be seen from my experience in 74 cases, the operation is attended with little risk or discomfort to the patient, who may be assured that it can be performed without a prolonged convalescence and without disfigurement of any kind. I venture, therefore, to offer it to the profession as a satisfactory substitute for the disfiguring exploratory incision on the anterior surface of the breast, for the uncertainties of puncture, and for the mutilation caused by amputation.

THE DELAY OF OLD AGE AND THE ALLEVIATION OF SENILITY.

ORATION ON MEDICINE AT THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT PORTLAND, OREGON, JULY 11-14, 1905.

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In 1805, Lewis and Clark, typical and celebrated among American explorers, turned their faces toward the furthest west and disclosed in a single expedition the possibilities of the continent and the mysteries of the great undiscovered. Their feat was in principle but a repetition of the undertakings of Columbus, De Soto and La Salle, of Daniel Boone and the numberless pioneers who so quickly, almost suddenly, transformed America from a desolate wilderness into the puissant commonwealth of to-day. In each we may discern a discontent with the established order and environment of his heritage; an inspiration to find in newness a satisfaction which the settled regions, settled habits of thought, settled manners of life failed to provide him at home. The word "settled" is significant. Our race is without rest until it settles things; and with this there stalks a poignant impatience with the things that are settled. The new, the undiscovered, the unattained, the unprecedented, this it is which charms American manhood. The Muezzin calling his prayers from a minaret in far away Cairo, the yellow haze in the circumambient air, the camels with jingling bells, the palms turned always eastward by the hot breeze from the monotonous sands,—these possess for the western man no attraction greater than that of poetic interest. In these scenes he could never make his life. The European finds in America every where that which impresses him with our youth; in the Orient, he sees the indisputable evidence of age and a settled order of things. This exploitation of new lands, the cry of "Westward Ho!" which for the past few centuries has stirred mankind, is rapidly, inevitably dying out; but during the long period of its continuance it has wrought important changes in our point of view, it has stimulated a luxuriant growth of thought, it has modified considerably our nature. As our common interest has been fixed upon the untried, we have gradually come to exaggerate the importance of new truths and to ignore the meritorious which the slow moving caravan of thought has brought us from the ages.

Now, it may seem a *non sequitur*, but reflection leads one to inquire if the great appreciation which we feel for the vigorous youth-spirit of recent times, has not educated us to prize, perhaps to over-value, youth, to the disparagement, if not to the absolute neglect, of old age.

In saying this we are not unmindful of the element of truth in the rightly interpreted utterance on this subject of one of our most distinguished colleagues. From the standpoint of the original investigator, as from that of the soldier, or the adventurer, there is nothing to replace the effort of the man under forty; but if for no other reason than to obstruct impetuosity and to provide such a handicap that youth shall not too soon outrun the limitations which a wise Providence has provided, middle and late old age have their uses. At any rate the old man is with us and there appears to be no acceptable method of obliterating him, even if it would add to the welfare of the race to do so.

Finding ourselves in this obvious position, it would seem the wise course so to manage that the disheartening effects of years may be as long as possible postponed; and to seek those methods by whose application we may do our utmost to minimize the terrors of senility. If youth is so delectable, let us find how it may be protracted; if old age is so beset with ineptitude, let us not rest until we learn how it may be mitigated. Such a proposal is not quite identical with a scheme for the prolongation of life—mere increase in years, although it would doubtless include this, however desirable or regrettable it might be. It has to do directly with something about whose desirability there can be no doubt. In other words, I ask your attention to the question of the practicability of *keeping* the various functions of the organism, of preserving the physical and intellectual powers, of delaying the onset of degeneration as much as may be, of developing a race less prone to early decay.

Then, besides this, I wish you to consider the feasibility of so managing the senile when once their degen-

eration has arrived, that many of their miseries may be avoided and the remainder lessened in degree. Having granted that age is inevitable the average man would seem to have become indifferent to his penalty for living, and, if complainingly, he none the less heedlessly allows his forces to ebb away prematurely. With some the whole of existence seems to be spent in infancy, adolesence and senility. There is no period in which one can say, "there is full, healthy maturity." When examined this early senility is found to result from pathologic processes and there the observation ends as though it were conclusive. But the event is not thus to be disposed of, for, according to our best standards, senile changes are always pathologic, and, therefore, the question of prematurity rests on some pathologic reason for cause, or else upon inherent weakness in human vitality. We are in the habit of speaking and thinking of senility as something separate and apart from disease; as a result, not sufficient attention has been given to the question of prevention of age.

On this subject one can not escape the bold work and bolder thought of Metchnikoff, and I quote at once his description of the degenerations of age. "In senile atrophy the same condition is always present: the atrophy of the higher and specific cells of the tissue and their replacement by hypertrophied connective tissue." It is this same process on which every teacher of medicine constantly harps in discussing disease, the disappearance of the parenchyma and the increase of the stroma.

One need not dwell on the theory of Metchnikoff as to the rôle of the phagocytes in the process; for the moment it is enough to know and to recognize that senile atrophy is pathologic and that, essentially, old age is disease. It is unnecessary to discuss the plausible but startling suggestion—that of finding some antiserum which might antagonize the development of the age producing agencies. Already we possess some knowledge of how to defer age, but this information is not generally insisted on as a guide in living. We frequently allude to measures of prevention, but we do not reduce them to a system which can be taught to the student and to society. If we are further to lengthen the probational study period in medicine, it will be wise to give the matter of deferred old age very careful consideration. If the subject were studied seriously, we would foresee a tremendous improvement in the type of humanity, and the readjustment of many habits, customs, social questions along altogether new lines.

Obviously, real progress cannot be made without accumulating data from which to deduce positive conclusions. At present we lack information on such simple matter as the effect on the organism of diet, exercise, recreation and rest. There are many opinions, but they are largely theroretical. To begin with, we must know something about the material with which we have to deal; that is, the inheritance, the reserve powers, the internal resistance of the individual. In fact, we know very little concerning the inheritance of any one. All are more or less obscure in the matter of family history. There are courts of records in which are found descriptions of estates, but there are no archives in which are deposited accurate descriptions of the various members of the family itself. We are more particular in relation to our domestic animals, especially in the introduction of a new strain. Inquiries are made as to the matter of endurance, longevity, powers of nutrition, good or bad qualities of mind or body, but concerning ourselves, there is an indifference to these important qualities of organic perfection. It would not seem to be altogether impossible to acquire some official record of the physical and intellectual qualities, in other words, strains in men. It is not improbable that if such records were known to exist, they would be not only consulted, but would gradually grow to have an influence on the formation of families. Love is said to know no barriers, but history fails to confirm this view. If a matter of class, of caste, or rank, has been sufficiently important to control the forming of marriage contracts, it is not impossible to conceive of a more intelligent public sentiment which would make an alliance with a family celebrated for physical, intellectual and moral superiority, a thing greatly to be desired; and conversely, which would lead to the abhorrence of an alliance with a family in which freaks, degenerates and incompetents, or in which a tendency towards lowered nutrition, too early maturity, or premature senility were frequent events.

Naturally this is not an affair of a generation, but it is unquestionably a doctrine which ought to be taught. The notion that acquired characteristics can have any transmitted influence on the character of the offspring, as formerly taught by the Lamarckians, is still doing great harm. Our young people should be instructed in the fact that the well-being of their posterity depends almost altogether on the native stamina of the germ-plasm with which they are endowed. They should be taught to understand the responsibility implied in maternity and paternity, and should be made to recognize that the greatest influence which they can have on the well-being of their children is in the selection of the spouse. The sentiment should be encouraged that parentage is a matter which concerns the public, and especially posterity, more than it does the parent; that the germ-plasm of the race is of all questions the most important which concerns it. Measures could be adopted which would make it more possible than at present for individuals to inform themselves concerning the family characteristics of the contemplated fiancée. A bureau for the precise registration of disease and causes of death, together with the chief facts in family and personal history, might be established through legal enactments, reinforced and made active by a high social sentiment. Such a bureau would afford the needed information, and the special study of the material thus provided would result in the formation of guiding principles in human biology and race development.

Such a system might seem to be contrary to our laws of personal rights, and, of course, the sanctity of reserve may not be easily disrupted. Nevertheless, with Emerson, "We shall one day see that the most private is the most public energy; that quality atones for quantity," and although we cannot attain at a bound to these heights of wisdom, we may, at least, begin to map out a way. He is short sighted who supposes that the complacency shown in the devolution of the race must continue, unchanged, eternally. We have only admiring applause for the remarkable accomplishment of Burbank in the vegetable world, and yet such are our deeprooted prejudices that we shrink from the application of similar principles to human uplifting even when we know it is possible. Shaler remarks that man "sorely needs a herdsman's care." The subject is painful, yet I think it will be acknowledged that susceptibility toward tuber-

culosis, insanity, alcoholism, epilepsy, *et cetera,* is hereditary. Granting this, it follows that a stock could be developed which practically would be immune to those diseases. Doubtless all will regard the realization of this suggestion to be remote and some may liken it to that of Maeterlinck who says: "Man may sometime master the secret of gravitation and by means of it steer his planet wherever in the universe he wills." The principle is open to such wide application that it may easily be obscured in absurdity. Nevertheless, here is an honest straight-forward truth not so far beyond our reach. It lies in a public demand that none but healthy parents shall be allowed to bear children. The brevity of middle age resides, first, in the inherited quality of the organized tissue; second, in the effects of its environal conditions on each organism. We physicians are making it our function to exterminate disease. Why should we be content with merely pointing out that certain disease tendencies are hereditary without taking some practical steps to prevent such disease transmission? As an illustration, it doubtless would be a hardship to the syphilitic to make procreation for him a penal offense. Nevertheless, such a course would be full of beneficence to the race. The amount of nervous and other disease in the innocent resulting from syphilis in progenitors is incalculable. The incompetence and misery which often overtake the unfortunate victim in middle life as the result of syphilis, one or two generations removed, must be considered. Those who have studied the subject carefully, regard this disease as responsible for one-fifth of all cases of arteriosclerosis, and of yet a higher proportion in those cases occurring in middle life. A man has not the moral right to beget disease. Notwithstanding that it usually comes through ignorance, it should not be allowed. The profession of medicine should make its convictions bear fruit, and should teach and should be expected to teach that the marriage of a large number of people whose nuptials they now help to celebrate, should either be prohibited or else made barren. To those who would regard the realization of these thoughts as unattainable, it may be remarked that the world is yet very young, and as a result, as Carlisle has said, in most things very stupid. At any rate it will be admitted that middle age could be considerably prolonged and the infirmities of old age largely mitigated if we could eliminate from the equation that faulty cell metabolism which arrives through inheritance.

The trend of modern thought is toward the development of the individual. Our researches in therapeutics, dietetics, immunity, gymnastics all alike are directed toward the betterment of the individual by making life possible to many who would otherwise perish, comfortable to many who would otherwise survive in misery—results in prolonging life. Our educational efforts concern themselves more and more with fitting for life the otherwise unfit, in so dealing with the neurotic, the semi-imbecile, the vicious and criminal that they may be practicable units in the body politic. The result is that individuals otherwise impossible are so modified that they are finding some happiness in life and become less disturbing elements in society as a whole. There can be no doubt as to the benefit to the individual, and no doubt as to the good which comes from the reflex effect on society. Perhaps nothing counts more for the moral up-lifting of the masses than the awakening of personal interest in all altruistic undertakings, but let me repeat, we must dismiss as untenable the views of the Neo-Lamarckians that acquired characteristics of the individual have any appreciable effect on the offspring. It is acknowledged that the natural tendency of defectives of all kinds is toward extermination. Left to themselves, many of these weak strains would disappear. In making it possible for these strains to continue to blend and to dilute the organic type of the race, we are unquestionably lowering the future standard of internal resistance and we are creating a threat to physical, intellectual and moral perfection.

On this subject Professor Woods Hutchinson of Portland has said some interesting things.

Is it unchristian or unethical to consider this question from the phylogenic standpoint, or, on the contrary, is it not from the highest ethical plane that we look forward to a means that may elevate man spiritually, strengthen him intellectually, increase his vital and physical vigor, thus widening the period of his usefulness and decreasing his sufferings as a whole? We find ourselves sustained in our efforts when they are directed toward helping the individual, but there seems to be a social veto placed on the study of generic betterment. Weismann and his followers have shown us that the character of the individual depends on the germ-plasm with which he starts life, and although education and favorable environments may modify greatly the individual, they have no effect whatever in improving the character of his posterity. The possibilities of an individual, his resistance to disease, his longevity, his strength and his intelligence are determined beforehand by his inheritance. It is known that it is possible to bring deterioration by introducing an inferior strain. No educational advancement can counteract the injurious effects of this preservation and inbreeding of the bad stock. Unless intelligent foresight be used to prevent this definite and ascertained source of degeneracy, we are likely to find a growing depreciation of our racial stock and, in spite of our modern preventive medicine, a progressive increase of mental and physical disease, and an abbreviation of the working years. By homely methods we have learned that aside from the question of perfect nutrition and proper exercise of function, there is nothing which contributes so unquestionably toward the improvement of organic life as intelligent study of what is known as breeding, in other words by the intelligent blending of the germ-plasm of healthy, resisting, long-lived stock so that there may result not inferior progeny, but offspring superior to the parental stock. I am aware that the question is not new, and that its mere mention exposes one to criticism, not only from the timid and ignorant, but even from the wise and philanthropic; and yet, no one can deny that in shutting our eyes to this truth which Nature spreads plainly before us and which she makes the subject of countless lessons illustrated by individual inferiority, perversity, disease and death, we are not doing all that we ought for the coming race, not all that we might toward assisting that evolution which we hope for, but which lingers so in the process. It will be said that no one can contemplate such a scheme as is here suggested without feeling strongly convinced of its impracticability. Of course, it must be admitted that the large fulfillment of such ideals is at present quite impracticable, but it is not impracticable to study the subject with the hope of finding certain aspects which may admit of modification.

By a study of the subject we would at least offer a reasonable antidote to the possible injurious effects of the modern rage for individualism. More than this, it may be possible, by more or less united action, so to modify established customs, social tendencies and common law that we may elevate the sense of family, and possibly municipal and national morality to a standard high enough to result in our placing the welfare of the community above the desires and the instinct of the individual. As we have somewhat meddlesomely diverted the natural tendency of deterioration and degeneration from its end, thus interfering with the action of the law of the survival of the fittest, it does not seem improper that individualism should recompense society by yielding some of its prerogatives for the welfare of the race; or, to put it more pointedly, it would seem only fair, since we have preserved the life of the weakling, that we should deny him the privilege of paternity, or since we have educated the defective or criminal youth into semi-useful citizenship that we should forbid him the right of increasing the number of his kind. In one of our states a legislative enactment looking toward this end was recently vetoed by the governor who accompanied his decision by a conventional lecture to the profession of medicine on its willingness to disregard the rights of individuals. This illustrates one of the difficulties in the way, and would seem to indicate still another field in which physicians must assume their rôle of public educators. The sentiment of the people is instinctively against public interference with personal privilege. This feeling seems to be particularly strong in the Anglo-Saxon people, and to be contrary to the nature of our institutions; yet, like every other privilege, it is susceptible of doing great evil if carried to its full logical extreme.

Are we not as an organic type suffering from an extreme application of individual rights? Are we not inflicting an injury on the race through permitting unwholesome privileges to the individual? Is it necessarily dangerous to attempt to create a public sentiment, a social feeling toward the making of new customs and the enactment of new laws which may result in the elimination of at least some of the more abhorrent and destructive elements that at present are blending with and antagonizing the evolution of the race? Would it not be desirable to have an aristocracy of health? That is to say, to see developed a zeal for physical and intellectual perfection, and to have that zeal supported by public sentiment, so that there might be created something like a caste, the attributes of which should be mental and physical wholesomeness, and from which should be excluded those families which are shown by carefully studied data to come of degenerate or unfit stock? This would result in a contest between the general and the particular. At present the particular, the individual, prevails; in the presence of rightly adapted social feeling the general would prevail. Evolution would thereby be speeded and not retarded as at present. The principle involved does not seem to be any more unethical than the application of the quarantine laws which now operate injuriously to the individual, but make greatly for the public good.

Let us now consider what may be accomplished in the way of postponing age by the reasonable treatment of even the poor material that comes to us. Undoubtedly the question is as broad as the whole subject of personal hygiene and general therapeutics, and so, for the most part, must be passed; there are, however, some aspects of the subject which deserve special consideration. One of these is the improvement in the nutrition of the aged as the result of good teeth. While all recognize the comfort and convenience which we owe to the dentists, it is doubtful if we fully appreciate how much they have contributed to good health and longevity. For another great advance we have to thank the oculists. Who can estimate the additional resources both of usefulness and happiness secured through the discovery of spectacles and the operation for cataract? Useful eyesight contributes much toward health and long life for the reason that it permits of a continued interest in living which otherwise would be lost. It permits of a struggle for an ideal and in this real happiness consists. The ideal, of course, is never reached, but, as Montaigne says, the reward is not found in the victory, but in the conflict. Perhaps no one factor is so important in maintaining courage and health in old people as the creation and continuance of some keen interest in life, and this interest, even in the otherwise enfeebled, may be kept up by means of useful eyes. Now comes the time-worn but neglected subject of arterial disease.

Too often our attention is for the first time attracted to arteriosclerosis by the appearance of fibroid or fatty degeneration, exhibiting itself in the figure, form and viscera of the individual. Even after these later changes appear measures may be adopted to stay the march of the process, but how much better it would be to anticipate it. For instance, by noting the high and rising blood pressure and the physical signs of cardiac strain, by estimating the decline in urinary solids and the rise in the urotoxic unit, by measuring the decline in respiratory capacity, or by detecting the falling off in cutaneous secretion and the loss of the pliability and softness of the skin, we may make ourselves aware that vascular degeneration is progressing. Heedless of these earlier manifestations we shall soon awake to the advent of the state which Sir James Paget has so marvelously described.

In the earlier steps of arteriosclerosis, if intelligent study be given to the individual, to his habits of life, to his excesses and to his deficiencies, very much can be done, and, by thoughtful men, is done, to delay arterial changes and to restore functional activity.

May I trespass so far as to emphasize the importance of judging and correcting the disturbed balance between assimilation and waste—the anabolic and katabolic processes? The facts are so well understood that one hesitates to mention them, and yet just here there is so much neglect of precious opportunity. There are successful methods of lessening the extent of auto-intoxication and of widening the field for the play of nutritional processes. This is so commonplace that we neglect it. Middle age often brings luxury and at the same period the contracting arteries narrow the field of physiologic activities. The circumstances of life and the taste of the man are for indulgence in appetite or for excess in undertakings, while the limitations of the organism are increased. The tendencies are thus in opposite directions and, with Munsterberg we ask, "How can they keep together who are going different ways?" Ultimately, they must separate, of course, but temporarily they may keep company if we help to preserve harmony between them. There is abundant proof that even advanced arteriosclerosis may be so far modified as to delay the oncoming degeneration and to admit of happy usefulness, but the victim must be content with

moderation and not hope, like Mahomet, to cleave the moon in twain.

Advanced arteriosclerosis is too generally neglected, and intoxications of one kind or another are for the most part responsible for it. Our prophylactic and curative measures are readily understood. It is well known that the relatively great fatality of pneumonia and other acute diseases is explained by the greater toxemia which exists late in life. Besides this, the auto-intoxication increases the blood pressure and induces prematurely the fatal events of cerebral, cardiac and renal diseases. Almost as deplorable as these are the conditions of unnatural excitement, confusion and depression from which many people unnecessarily suffer in early old age. Still further there may be found in vascular disease the source of much severe pain from which old people suffer. This pain is often referable to the aorta, at times to those forms of aortitis which Clifford Allbutt has described, and also to aortitis and peri-aortitis of the abdomen recently so well set forth by Teissier of Lyons. The latter has also shown that the pain can be ameliorated, the progress of the disease stayed and even great improvement induced by rational treatment. Aortitis and peri-aortitis often greatly interfere with the flow of blood into the branches of the abdominal aorta, and as a result the organs supplied by these branches suffer special degeneration. In middle age and later life, intractable diseases of the stomach, intestine, kidneys and other organs could be dealt with much more successfully, and comfortable longevity secured, if more attention were devoted to this pathology.

There remains for brief consideration the question of what can be done to make old age more tolerable; in other words, to remove it to a physiologic basis. We find on close consideration that most of the derangements from which the aged suffer can be classified as belonging distinctly to pathology, but I am afraid there exists a tendency among us to dismiss these matters as necessary corollaries of senility, without giving them that careful consideration which similar processes receive in younger patients. To a few the diseases of old age have a peculiar charm, and these few who give senile diseases special study seem to agree that the complaints of the aged arise for the most part from toxic causes. Even the threadbare question of arteriosclerosis falls to a large extent under this head. There is good reason for believing that this toxic state which underlies the decadence of senility takes its origin for the most part in the colon. Metchnikoff supports the view that mammals have developed a large colon for the purpose of storing the products of digestion, and that man has inherited an enormous colon at the expense of his longevity. This organ harbors an immense number of bacteria leading to fermentations, putrefactions and the production of alkaloids, fatty acids and toxins which man has to combat for the length of his mortal days. While vitality is young and vigorous, the combat is not so unequal, but with failing powers auto-intoxication prevails in the contest between the internal resisting powers of the organism and the toxic adversary made potent by inheritance. Unfortunately the degeneration of age first produces functional insufficiency of the organs of elimination, then their degeneration, and as a result we find the skin, kidneys, lungs, liver incompetent in each individual overtaken by years. It is somewhat remarkable that facts so well understood as these do not receive more attention.

There are few text-books, there is little teaching devoted to the pathology and right management of senile disease, and yet experience teaches that few patients respond more satisfactorily than do the aged if their cases are approached with the principles in mind which are here set forth. It is not merely a question of dilatation of the colon, nor of any special defect of the organ; even in the absence of these, the source of auto-intoxication exists and becomes important because of the failure of the skin and other emunctories which, earlier in life, are relatively sufficient. The indications are obvious. In addition to the usual measures for improving the general circulation, old people are benefited by systematic colonic lavage, stimulating baths with superficial massage, prescribed pulmonary gymnastics and an abundant drinking of pure water. It is the almost universal neglect of these matters which has made it seem to me a subject of sufficient importance to call to your attention in a general address. There is something inspiring about youth which gives an incentive to our care of the diseases of childhood and adolescence, but there is something benignant in studying the problems that lead to the postponement of age and to the alleviation of the trials of senility. Old age is repulsive when it is pathologic, but is beautiful when it is physiologic, and it would appear as a fitting theme for the consideration of this great body at its meeting in this new land of the setting sun.

THE INFLUENCE WHICH THE ACQUISITION OF TROPICAL TERRITORY BY THE UNITED STATES HAS HAD, AND IS LIKELY TO HAVE, ON AMERICAN MEDICINE.

ORATION ON STATE MEDICINE AT THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, PORTLAND, OREGON, JULY 11-14, 1905.

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SAN FRANCISCO.

It is a custom in many universities, both in this country and in Europe, to allow each professor leave of absence during every seventh year of service. This custom is doubtless based on the Sabbatical year of the Pentateuchal codes, an institution which demanded that the fields be allowed to lie fallow every seventh year. It is a question whether the Sabbatical year, as an institution, could not with benefit be introduced into matters medical, and whether we might not profit by resting every seventh year, and devoting our time, not to the strenuous throes of medical existence, but to a calm, dispassionate review of the progress of medicine in the preceding septennate, and the factors which have influenced that progress. With this idea in view I have chosen to speak to-day on an aspect of our medical progress which is now in its Sabbatical year.

It is at present almost exactly seven years since, by the terms of treaty following the Spanish War, the United States came into possession of tropical territory in both the eastern and the western hemispheres. It is unnecessary and inappropriate to discuss here the general significance of this territorial acquisition, its bearing on politics, its effect on commerce, its influence on public affairs in general; it is sufficient if we, as the representatives of the medical profession of this country, take stock of the medical questions involved, discuss their significance, and gauge the effect which they exert on American medicine in general. No doubt many of our hyperopic brethren foresaw, seven years

ago, some of the effects which our acquisition of Porto Rico and the Philippines was to have on American medicine. There is just as little doubt that some of the results were entirely unlooked for, and have been complete surprises. It might appear at first sight that, from analogy, we should have been able to foretell the influence which increased commerce with our tropical territory, and the return of our soldiers and sailors with tropical diseases, would have on medicine in the United States. Obviously one would look to the experience of European countries, and notably of England, to form a basis for judgment, for these countries have had tropical possessions for generations. It must not be forgotten that the physical conditions here are different from those in Europe, for while Europe is almost entirely within the temperate zone, portions of this country are semi-tropic, and a few very small areas are actually within the tropical belt. The United States, therefore, presents a much more favorable soil for the transplantation of tropical diseases than does Europe. Realizing this, numerous American writers on tropical diseases have sounded, in the last seven years, notes of warning and alarm. Their apprehensions are based more on theoretical grounds than on observed facts, but for all that are worthy of our most serious consideration. The object of this inquiry is to determine, if possible, how great this danger is. What are the prevailing diseases of our tropical possessions? Which of them, if any, has appeared among us; which, if any, has gained a foothold on our soil; and which may possibly become widely distributed? Aside from endeavoring to answer these questions, we may with profit glance at the effect which the study of tropical diseases has had on the comprehension of cognate diseases in the United States, and also observe that it has led to the recognition in this country of unsuspected diseases of wide distribution, and great economic importance.

UNCINARIASIS.

Perhaps one of the most startling results of the increased interest in tropical diseases has been the discovery that large sections of the southern portion of this country are infected with the hookworm, and that large numbers of the inhabitants are suffering from uncinariasis (ankylostomiasis) or hookworm disease. The starting point of this remarkable discovery was, almost certainly, the work of Ashford in Porto Rico in 1900. This observer noted the great frequency of the disease in that island, and pointed out that, to a large extent, the disability and wretched condition of many of the natives was due to it. The credit for drawing attention to the probability that the disease was widespread in our southern states is due to Charles Wardell Stiles, the zoologist of the Bureau of Animal Industry, and to him also is due the credit of amply proving what he at first brought forward merely as a probability. It would be out of place here to go into detail as to the clinical history of this disease, or the minute structure of the parasite which causes it. Mention must be made, however, of Stiles' discovery that the American uncinaria differs from that of Europe. It will be of interest to consider the geographical distribution of uncinariasis in this country, the main facts connected with the method of its spread, and the evidence as to the likelihood that it will become more widely prevalent than it is at present.

Up to the year 1900 not more than ten authentic cases of uncinariasis were on record in American literature, though there are statements by southern physicians in the writings of the early part of the nineteenth century which leave little doubt that the disease was then prevalent. During 1900 and 1901 only nineteen cases of the disease were reported, but in 1902, following the publication of Stiles' monograph on "The Significance of the Recent American Cases of Hookworm Disease in Man," the number of reported cases rose at a bound to 524. In 1903, 273 cases were reported; in 1904, 334; the number this year will probably not be so large, as the disease is no longer a rarity to southern physicians, and they will not be so apt to record cases. Prior to 1900, then, possibly ten authentic cases of hookworm disease had been reported; since this date I have been able to collect from the available American literature 1,212 cases, of which 1,095 originated in the United States, and 117 were imported from other countries, mainly from Porto Rico and the Philippines. Of the latter 62 are reported by Gunn, and occurred in San Francisco, mainly among Porto Ricans.

If we separate the domestic from the imported cases we find that this disease is distributed mainly through the southern states along the seaboard from Virginia to Texas. But it is not confined to seaboard states, for Missouri and Tennessee are also infected. The states in which the disease is known to be indigenous, and probably widely distributed, are Virginia, North and South Carolina, Georgia, Alabama, Florida, Louisiana, Texas, Mississippi, Missouri and Tennessee. This list of states includes only those in which definite evidence of the presence of the disease has been furnished; it does not include, I think, all of the infected states. Taking into account the similarities of soil and climate, anyone who will take the trouble to make a map of the known infected area will feel convinced that Arkansas, Indian Territory, Oklahoma, West Virginia, Kentucky, and the southern portions of Illinois, Indiana, and Ohio are also probably infected. The physicians in some states have shown a lamentable lack of enterprise in investigating this disease, while in other states extensive and valuable studies have been made of it. As I have already stated 1,095 cases of domestic uncinariasis have been reported since 1900; 824 of these have been observed in three states, Georgia, Alabama, and North Carolina. This has been due to the interest and energy of single physicians, in Georgia of Claude A. Smith, Warfield, and Harris; in Alabama of E. D. Bondurant, and in North Carolina of Nicholson and Rankin. A knowledge of the distribution of the disease is not merely of academic importance, for the economic aspects of uncinariasis are paramount. There is little doubt that the stigma of laziness and general inefficiency which has attached for generations to the so-called "poor whites" of the South has been earned by them not as a result of qualities due to innate "cussedness," but because a large percentage are suffering from uncinariasis with the resultant physical and mental deterioration. This being the case, a plotting out of the infected areas is one of the first steps which must be taken preparatory to stamping out the disease. This is only one step, however, the others depending on our present conception of its method of spread. At present there are two main theories as to the means by which the parasite gains entrance to the body, the one presupposing that it enters through the alimentary canal, the other that it gains entrance through the skin. The advocates of the former theory

hold that polluted drinking water, and food soiled by dirty hands are the means of introduction, the advocates of the latter, that the so-called "ground itch" is the point of entrance of the *Uncinaria rhabdites*. There is a good deal of evidence in support of both views, though the work of Claude A. Smith and of Nicholson and Rankin favors the idea that the cutaneous form of infection is the more important. In view of this the wearing of shoes, especially during the rainy season, becomes the most important prophylactic measure, though the necessity for pure water supplies and the proper disposal of excreta still remains of great importance. In all such matters the enforcement of hygienic laws can never be obtained without education of those who are at fault. As uncinariasis is essentially a country disease (I have not been able to find on record a single American case which originated in a city), the question is one which must be dealt with by the country physician, on whose back falls a heavy load of responsibility. The stamping out of this disease is, of course, of great economic importance to the South, but, further than this, the question arises whether it may not be of importance to other parts of the country. Is there any chance that uncinariasis may become more widely distributed than it is at present? The question is a hard one to answer. While there has not been a lack of physicians who have predicted such a spread, it cannot be said that there is much actual evidence that it has occurred. There are a few instances in American literature in which the evidence plainly points to infection of natives from imported cases. Such, for example, are some of the cases reported by Möhlau in Buffalo, where Polish and Italian laborers contaminated a brickyard. That such sporadic outbreaks can and will occur can not be denied, and physicians all over the country should be on the lookout for them. Whether the disease will ever become widespread outside of its present habitat is quite another story. It must not be overlooked that a variety of circumstances are necessary to its spread; the right kind of soil, sufficient heat, and enough moisture for the parasite, and a lack of certain hygienic precautions on the part of the inhabitants of the area to be infected. The absence of any one of these conditions may be fatal to the dissemination of the disease. Considering the fact that uncinariasis has existed in the South for at least 100 years, and probably longer, it does not seem very probable that it will ever extend much beyond its present limits. What is needed at present then, is a more accurate knowledge of its distribution, and the inauguration of an educational and sanitary campaign to effect its extermination.

DYSENTERY.

One of the first diseases which the American army surgeons in the tropics had to confront was that scourge of camps, dysentery. The study of the acute form of the disease had received a great impetus from the work of Shiga in Japan, and the investigation of this condition in the American troops in the Philippines, instigated by Flexner, has since been carried on by Strong and Musgrave, J. J. Curry, and Charles H. Craig. It can fairly be said, I think, that our conception of the etiology of dysentery, and particularly of the tropical form, has been completely revised in the last few years, and this revision has depended, in no small measure, on the work of American investigators. So far as tropical dysentery is concerned, the studies of recent years have taught us to recognize two distinct forms, the bacillary and the amebic. The bacillary form, of which the acute dysentery of the tropics represents the most common type, is due to an organism first described by Flexner, and closely allied to the bacillus described by Shiga in the epidemic dysentery of Japan. In the chronic forms the ameba seems to have held its ground as the main causal agent, though the earlier investigators in the Philippines seemed inclined to think that it was usually a secondary invader. Our knowledge of the life cycle of the ameba, of the differentiation of pathogenic from non-pathogenic forms, and of the cultivation of the organism, has been achieved in the past few years, and is associated with the names of Craig, Strong and Musgrave, and Caspar Miller. A more exact knowledge of the complications of dysentery has also resulted from the work of our army surgeons, and it is to be especially noted in this connection that the so-called "tropical" abscess of the liver is nearly always due to the amebic as opposed to the bacillary form.

The most surprising and unlooked-for result of the stimulus given to the study of dysentery has been the discovery that the same group of organisms which is responsible for tropical bacillary dysentery is also concerned in dysentery in this country, and in certain forms of the summer diarrheas of infancy. The first steps in determining these relationships were taken under Flexner's guidance during 1902. In that year Vedder and Duval published the result of their work on the dysentery of the United States, work which was based on both sporadic and epidemic cases, and which showed that certain types of dysentery all over the world were due to the Shiga group of bacteria. In the same year Duval and Bassett published their preliminary announcement of the isolation of bacteria of the same group from cases of infantile summer diarrhea. Subequent studies, conducted mainly at the large centers in the East, have, in the main, confirmed these observations, and have led to more accurate knowledge of both the clinical and bacteriologic aspects of these two classes of disease. Since 1903 investigation has been mainly focussed on the summer diarrheas of infancy, the scourge of the tenement districts of the large cities. These studies have resulted in the classification of the *Bacillus dysenteriæ* into three main types, a differentiation which was suggested in part by Gay and Duval in 1903, and which has since been rendered more exact by the work of Hiss and Russell, and that of W. H. Park and his associates. On the clinical side it has been shown that all classes of summer diarrhea are not due to organisms of the dysentery group, but that certain types associated with mucus and blood in the stools are nearly always associated with them. It has also been shown that these organisms, like the pus cocci, may give rise to primary infections, or may play the rôle of secondary or terminal invaders. Mild cases without blood in the stools may also be due to this group of organisms, accurate and early diagnosis only being possible in any type of case by means of a bacteriologic examination of the feces. The serum reaction, while of some value, appears late in many cases, and is not available for early recognition of the disease.

In his report on Philippine dysentery Flexner suggested the possibility of serum therapy in these cases, and the discovery of the relation of the *Bacillus dysenteriæ* to infantile summer diarrhea led to attempts at the production of a curative serum. During 1904 such

a serum was used in a number of outbreaks of dysentery and summer diarrhea. The results, as a whole, have been disappointing, but will probably improve as we gain in experience. As Booker pointed out in 1903, little is to be expected from the serum in cases in which marked anatomic lesions are present. The work done under the Rockefeller Institute and summarized by Holt shows that the serum to be of value must be used early and in repeated doses. Judging from the results of Shiga in Japan more is to be expected for the serum treatment, and, as a matter of fact, it has not yet received a fair trial in this country. At present we need more knowledge regarding the natural history of the dysentery germ, its method of introduction, and the distribution of this form of infection in the United States. As regards the means by which the germ is introduced into the body there is already some evidence, both from the Philippines and this country, that contaminated water is at fault, but the whole matter needs more thorough investigation. The distribution of this form of infection has hardly been studied outside of the large cities of the East, and although the severe forms of infantile diarrhea are almost unknown on the Pacific Coast, there is little doubt that they exist in the South and middle West.

YELLOW FEVER.

At the time that the Island of Cuba was occupied by American troops in 1898, yellow fever had been endemic there for 130 years. The disease was not widespread, but was mainly confined to the coast towns, and was particularly prevalent in Havana, the continuous stream of non-immune Spanish immigrants serving to keep up the infection. A great deal of study had been devoted to the disease at this time, and in the years immediately preceding the Spanish war renewed interest had been awakened by the work of Sanarelli, who claimed to have found the causal agent in his *Bacillus icteroides*. His claims had met a good deal of opposition, especially from Sternberg in this country, and many yellow fever experts did not accept his results. In view of the prevalence of the disease, and the constant menace which it offered to our southern states, a commission composed of Walter Reed, James Carroll, Jesse W. Lazear, and Aristides Agramonte was detailed to Cuba to study it still further. The commission presumably started out with a disbelief in Sanarelli's work, for certain of the members had published investigations showing that the *Bacillus icteroides* was closely allied to, if not identical with, the hog cholera bacillus. While Sanarelli's work was repeated as a necessary precaution, and was proved to be erroneous, the commission concentrated its efforts on the investigation of the relation of the mosquito to yellow fever, a relationship which had been insisted on by Carlos Finlay of Havana for nearly twenty years, and which the work of Carter on the time limit between primary and secondary cases rendered probable.

It is not necessary to go into details as to the methods used by the commission in their work, further than to state that they were scientifically above reproach. It will be of interest, however, to consider their results, and the influence which they have had on the practical aspects of yellow fever quarantine. Briefly stated these results were as follows: The proof that Finlay's conception that yellow fever is conveyed by a certain variety of mosquito (*Stegomyia fasciata* of Theobald) is correct. The demonstration that a certain time must elapse after the mosquito is infected before it can transmit the disease; that the causal agent is in the blood during the first few days of the disease, that it can be destroyed by heat, and that it can pass through filters which hold back some of the smaller forms of bacteria. The explosion of the old idea that the disease can be conveyed by fomites, unless these are of a character to allow of transmission in them of infected living mosquitoes. These are the main results, and they have led to greater accuracy in our knowledge of the incubation period of yellow fever, increased study of the yellow fever mosquito, and an entirely new conception of the prevention of the disease. Since the original work of Reed, Carroll, Lazear, and Agramonte several independent observers have confirmed their findings, notably Guiteras in Cuba, Marchoux, Salembini, and Simonds in South America, and the working parties of the U. S. Public Health and Marine-Hospital Service in Vera Cruz, Mexico. The investigations carried on under the Public Health and Marine-Hospital Service have also supplied many details extending our knowledge of mosquito transmission, of the life history of the yellow fever mosquito, and of quarantine methods against the disease. Few discoveries in medicine have led to more rapid and more brilliant practical results than those above cited. The story of the remarkable change in the yellow fever history of Havana achieved by the work of Gorgas reads almost like a romance. When we consider that the annual number of deaths from yellow fever in Havana for the ten years preceding the establishment of the mosquito theory averaged about 500, and that under Dr. Gorgas' administration they were cut down in two years to nothing, we can enthusiastically echo the sentiments expressed in a resolution of the conference of State and Provincial Boards of Health, in which they say: "We regard (it) as one of the most brilliant achievements of the application of sanitary science to public health work ever accomplished." Judging from recent reports it seems likely that Gorgas will repeat his Havana success in the Isthmian Canal zone. We have still to discover the cause of yellow fever, and we have still to ward off its advances in our southern states. So long as our Central and South American neighbors pursue their present lax sanitary methods we are liable to have sporadic outbreaks of the disease in those regions in which the *Stegomyia fasciata* can multiply. As Carter and Howard have shown, this mosquito is widely distributed in the subtropic portions of our country, and it behooves us to continue with the work of mosquito extermination, to increase its range as rapidly as possible, and to keep up with its oldtime strictness the quarantine of vessels, especially sailing vessels, from infected ports. The protection of our land boundaries to the south will, of necessity, be much more difficult, and judging from the recent experience in Texas, it is by this route that infection is now most likely to reach us.

MALARIA.

The soldiers returned from Cuba and Porto Rico, and later those from the Philippines, offered an opportunity for the study on a wholesale scale of certain aspects of malaria, an opportunity which was grasped by both military and civilian physicians. During and immediately following the Spanish War the accomplishment of greatest importance resulting from this study was the overthrow of the refuge of the careless diagnostician, typho-malarial fever. Those physicians who had studied malaria and typhoid fever carefully before the

war, and who had controlled their diagnoses by blood examinations, had always been skeptical about the existence of combinations of the two diseases, and had published from time to time protests against the indiscriminate use of the term typho-malarial fever. It needed the studies of the camp fevers, however, to prove to the satisfaction of most physicians that the combination was exceedingly uncommon, and that when it occurred the malarial fever preceded, or more commonly, followed the typhoid fever. In his remarks on the subject, based on the examination of the blood of 159 typhoid cases at Camp Wikoff, Ewing says: "In no case of undoubted and established typhoid fever were malarial parasites found in the blood in connection with any of these sudden rises of temperature (in typhoid), but only at the onset of the disease or during convalescence," and later in his article, "In short, in spite of painstaking effort, the attempt to find a case of typhoid fever and active malaria progressing simultaneously was unsuccessful." Aside from this, the clinical study of the disease has received but few important additions since 1898, though mention must be made of the valuable studies of Craig on latent and masked malaria, studies which showed how great the danger to a community might be from soldiers returned from the tropics. In his article published in 1904 Craig states that 25 per cent. of the soldiers returning from the Philippines show latent or masked infections, and in a large percentage of these cases the parasite is the estivo-autumnal crescent, a stage of the organism capable of development in the mosquito. The same observer cites one company of 60 men in which 41 had parasites in their blood, and yet but 14 complained of illness.

As far as the parasitology of malaria is concerned, the past seven years have been marked by great simplification in staining methods, but discoveries of paramount importance have not been numerous. The studies of Craig on estivo-autumnal fever have tended to confirm the views of the Italian school as to the duality of its parasite, and the work of Ewing on the tertian parasite has thrown light on its early sexual history in the circulating blood. Working Party No. 2 of the Yellow Fever Institute has been able to show that at the time of the malarial chill there is present in the blood a toxin, and have been able to produce a chill by the intravenous inoculation of filtered blood extracted during the paroxysm.

The study of the distribution of the malarial mosquito has been carried on in a few places, in Boston by Theobald Smith, in the Valley of the Androscoggin by Jordan, and in Baltimore by Hirshberg and Dohme, but the amount of work which has been accomplished in this direction, and the time and money which have been expended in the attempt to exterminate the malarial mosquito, is almost infinitesimal when we consider the territory affected by the disease, and the losses resulting from it. Woldert estimates the annual financial loss in Texas alone at over $5,000,000, and if all the infected zones in the United States are considered the loss must be appalling. Like yellow fever, malaria is a perfectly preventable disease, but to stamp it out requires either destruction of malarial mosquitoes, or protection and sterilization of infected individuals. In this country mosquito extermination has always been the favored plan, but before it can be accomplished a much more complete knowledge of the distribution of the anopheles is necessary, and much more thorough education of the public as to the necessity of the work. The danger that the disease may be introduced into uninfected areas by soldiers returning from the tropics is a real one, though, as Theobald Smith has shown, it is unlikely that the estivo-autumnal parasite will be introduced into the northern states. Still, we have plenty of southern territory not yet infected, and the extermination of mosquitoes would prevent the possibility of such contamination. The question is one which has not yet been seriously considered in large sections of the country, but is, nevertheless, of the greatest importance.

FILARIASIS.

The work of Ashford in Porto Rico, and of Calvert in the Philippines has shown that filariasis exists in both places. In Porto Rico it is probably widely distributed, as Ashford found it in 30 out of 250 soldiers in the Porto Rican regiment. Cases of Gunn and of Brown have shown that infected individuals from this source have already reached this country. In the Philippines the extent of the disease is doubtful. Calvert found the filaria in only two out of 426 Filipinos, but it is to be noted that both of these individuals came from the same district, and it is likely that the disease is much more prevalent in some places than in others. In this country several domestic and imported cases have been reported since 1898. It seems extremely likely that the disease is much more common in the South than the literature would indicate, and that it is often overlooked. The fact that one man, De Sassure of Charleston, was able to report 22 cases, most of them originating in the United States, is pretty strong evidence that the disease is much more prevalent than is generally supposed. It is certain that there are present in this country varieties of mosquito capable of transmitting the filaria. As these generally belong to the *Culex* family, which is widely distributed throughout the United States, it seems possible that there is real danger of new districts becoming infected by returning soldiers or Porto Rican laborers. Before the matter can be definitely settled we need more information as to the exact varieties of mosquito which can transmit filariasis, and their distribution in this country. At present it is quite generally assumed that a number of varieties of *Culex*, and at least one of *Anopheles* can transmit the disease. We believe it was Myers who brought forward evidence to the contrary, and the matter is one which needs further investigation.

MALTA FEVER.

The fact that Malta fever was present in Porto Rico was first demonstrated by Musser and Sailer, and later by Cox and Curry. In 1900 Strong and Musgrave called attention to its occurrence in the Philipines, and still later cases occurring in returned soldiers were described by Curry and Craig. The number of cases which has been described is small, and practically all of them are in soldiers and sailors. In the seven years which have elapsed since the first case was reported in this country, no case originating here has been described, and it seems that there is little likelihood of the disease becoming disseminated in the United States. It is within the bounds of possibility, as Curry pointed out, that it already exists in the southern states. In its acute form it is easily confounded with malaria, and in its chronic stages it is generally diagnosed at first as chronic rheumatism. The serum reaction of the disease is so reliable, and the test is so easy of per-

formance, that all cases with doubtful fevers in the southern states should be subjected to it. It seems highly probable that if this is done systematically the disease will be found to be present.

TRYPANOSOMIASIS.

The relation of trypanosomes to animal diseases was observed in the middle of the last century, and renewed interest has been awakened in these parasites in recent years by the discovery of new forms of animal trypanosomiasis, and by the observations on human trypanosomiasis initiated by the work of Dutton. The presence of the trypanosome infection known as surra among horses and buffalo in the Philippines was noted soon after the American occupation, and the results of American researches on this disease may be found in the valuable monograph of Musgrave and Clegg. Up to 1903 attempts to isolate trypanosomes in pure culture had been ineffectual, but in that year McNeal and Novy published the results of their work on the rat trypanosome. They were able to obtain the first successful pure culture of a pathogenic animal parasite with the absolute demonstration of its causal relation to the disease. Up to this time many observers believed that the different forms of animal trypanosomiasis were due to the same organism, but during 1903 and 1904, Novy, McNeal, and Ward were able to cultivate the trypanosome of nagana or tsetse disease, and also that of Philippine surra, and could demonstrate that the parasites from these different diseases showed variations in structure and mode of growth. Later Lewis and Williams succeeded in cultivating the frog trypanosome, showing that this also differs from the other forms. Some forms of animal trypanosomiasis have appeared in the United States, dourine having been observed in Nebraska. Whether there is any possibility of the introduction into America of human trypanosomiasis will be difficult to determine until we know more of certain forms parasitic in man, and the method of their spread. The form of the disease which is most likely to be found in the Philippines, and hence most likely to appear in this country, is the affection known in India as kala-azar or dum-dum fever. The parasite of this disease, usually spoken of as the Leishman-Donovan body, has recently been shown by Rogers and Chatterjee to belong to a sub-family of the trypanosomes. The method of transmission of this form of the disease to man is not definitely known so far as we can determine; it is probably transmitted like nagana by an insect, most likely a mosquito. The possibility of its introduction into this country will probably depend on the presence or absence of some insect host.

DENGUE.

A disease which does not seem to have received the study which it merits, considering its frequency, is dengue, or break-bone fever. The Reports of the Surgeon General of the Army for 1902 and 1903 show that in the Philippines it caused, in the former year, 31.67 cases of sickness per 1,000 of strength, and in the latter year 171.39 cases per 1,000 of strength. Presumably it has not been carefully studied in the Philippines, or in the South, where it also occurs, on account of its short duration, and the almost absolute lack of fatalities. In the Isthmian Canal Zone it has been studied in the last two years by Sutton and Carpenter. They have shown that it is probably not of the malarial class of diseases, but that it may, as Graham claimed, be transmitted by the mosquito. Their studies of the blood show that it is one of the diseases accompanied by leucopenia and relative lymphocytosis, and their bacteriologic studies suggest that a bacillus similar to the influenza bacillus may be the cause. The disease is one which, judging by its past history, is unlikely to spread beyond the southern parts of this country. It is worthy of more extended study by modern methods than has yet been devoted to it, and American physicians in the Philippines and the Isthmian Canal Zone will probably have excellent opportunities to clear up many moot points in connection with this disease.

ASIATIC CHOLERA.

During 1902 Asiatic cholera appeared in Manila, spread to the neighboring islands, and caused over 90,000 deaths before it was stamped out. The incidence of the disease among the whites was comparatively small, but among the natives it ran rife, owing to their lack of hygienic precautions and the favorable temperature conditions. In many instances the disease was not carried, as usual, by contaminated water, in fact, in the large cities indirect contact through food was a much more frequent method of spread. On account of the violent local reaction produced by Haffkine's cholera prophylactic the natives objected to its use, and as the scattered distribution of the population made it almost impossible to control them, this method was given up. The objections to Haffkine's prophylactic lead R. P. Strong to attempt the production of a protective serum lacking in the irritating properties of those hitherto used. By a process of bacterial autolysis followed by filtration of the culture he was able to produce a practically non-irritating protective. From the experimental standpoint Strong was able to show that animals and men treated by his method showed but little local reaction, yet developed in their blood substances strongly bactericidal to the cholera spirillum. As the cholera had practically disappeared from the Philippines at the time that Strong's work was completed there has as yet been no opportunity to put his method to a practical test. From what we know of the disease there is little likelihood that it will ever get a foothold in this country under our present quarantine regulations.

PLAGUE.

The appearance of plague in several parts of the civilized world in 1900, and especially its appearance in San Francisco and the Philippines, called the attention of American medical men to this disease. Luckily, but few of them had an opportunity to study it, and most of the American work on this disease has been done in the Philippines, where, according to Munson, 970 cases with 812 deaths occurred between January, 1900, and September, 1903. It can not be said that anything startlingly new was discovered during this period, but a good deal of valuable confirmatory work was turned out. In this connection must be mentioned the work of Barker, Flexner, and Novy on various aspects of the subject, the work of Calvert and Ewing on the occurrence of plague bacilli in the circulating blood, and the work of Herzog and Hare on latent and ambulatory plague. The outbreaks of the disease in Australia, in Honolulu, in Glasgow, and in San Francisco have served to warn us of the necessity of being constantly on guard against its insidious approach. The recent outbreak in Leith, in which, as in the San Francisco outbreak, the origin of the disease was in doubt, shows us that at all our seaports constant vigilance must be maintained, and this

must be the case so long as endemic foci are present in Asia. In the preventive work in this country, in this as in other infectious diseases, too much praise cannot be given to the officials of the U. S. Public Health and Marine-Hospital Service who, besides having to bear the burden of their appointed work, have often also to suffer the slings and arrows of outrageous politicians, and the contumelious taunts of misguided citizens.

CONCLUSION.

We have now considered the more important of the tropical diseases which occur in Porto Rico, the Philippines, and the newly acquired Isthmian Canal Zone, the effects which their study has had on American medicine, and the chances of their becoming domiciled in this country. It has been possible to touch on many important subjects but lightly, and I ask your indulgence for the sketchy manner in which the subject has been treated. Of necessity a number of tropical diseases have not been mentioned, tropical ulcer, frambesia, bilharziasis, and blackwater fever, for example. These diseases are all present in our tropical possessions, but are of relatively minor importance, and as yet have received but little attention from American observers. Two general conclusions are forced on us as a result of this study, one being that many of the so-called "tropical" diseases are widely scattered through the subtropical portions of this country, the other that the acquisition of tropical possessions by the United States has had a markedly stimulating effect on American medicine, and has led to valuable work, some of it of the very first rank, all of it showing evidences of earnest and painstaking effort.

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A CASE OF PERIPHERAL NERVE SYPHILIS.*

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CHICAGO.

That the peripheral nerves, both cranial and spinal, frequently become affected in the course of cerebrospinal syphilis, is every-day experience. Disease of peripheral nerves or nerve-roots without co-existent syphilis of the central nervous system, is rather unusual. Of all cranial nerves the trigeminus is most often affected singly by the specific process. This may occur as part of a periostitic process in the foramina of exit; at the optic foramen, foramen ovale and foramen rotundum; or as a result of destructive processes in the nucleus by hemorrhage, softening, sclerosis or tumor. Isolated disease of the trigeminus, however, is exceedingly rare. The rule is for other nerves to be involved along with the trigeminus in the following order: Optic, facial, oculomotor, abducens, auditory, olfactory, trochlear. The facial, acousticus and motor nerves of the eye are frequently affected together and constitute part of a basal meningitis.

The clinical phenomena of peripheral nerve-syphilis manifest themselves either as neuralgia, polyneuritis, or root neuritis. Of the cranial nerves the trigeminus is usually the seat of isolated or simple neuralgia, which differs in no respect from ordinary trigeminus neuralgia from other causes. The same is true of the symptomatology of facial and auditory neuritis. It is evident that the diagnosis can not be made from the symptoms, but from the history of specific disease and the discovery of the stigmata of syphilis.

Nonne in his book on "Syphilis of the Nervous System," best describes root neuritis in Kahler's words:

In an individual, the subject of syphilis, or who has had syphilis, there appear besides other cerebral symptoms, or without any brain symptoms, gradually progressive paralyses of various cranial nerves, which are recognized as peripheral, for instance, facial paralysis. One nerve after another is attacked in a most irregular succession. In the second place, there may appear gradually increasing neuralgias in various spinal nerves, with hyperesthesias, or girdle pains, as a consequence of posterior root involvement. Disease in the anterior roots will manifest themselves by corresponding motor paralysis of the peripheral type.

Patient.—A. Y., German, aged 40, single, a cook, entered the Cook County Hospital, March 17, 1905.

History.—His family history is negative. He is a moderate smoker, never drank spirits and but little beer. He had

* Presented before the Chicago Neurological Society, 1905.

several venereal sores about 8 years ago; one of these was a hard chancer. This was followed by secondaries, such as sore-throats, alopecia, mucous patches and eruptions. About seven years ago he suffered from what he calls acute articular rheumatism. His joints were swollen and painful for three months and the disease disabled him altogether for about six months. Last September he experienced severe pains in his left thigh which he considered rheumatic. After the application of some liniment he discovered that not only was his thigh smaller and weaker, but that his left eye was also turned inward and that he saw double. A two months' stay in the hospital brought about much improvement and subsequent treatment at the Illinois Eye and Ear Infirmary completed the cure. The condition of the thigh, however, has remained unchanged.

He now comes to the hospital on account of severe pains in the entire right half of his face, which affect principally the right ear, but also involves the lower maxillary region. For a week he suffered constant pain, which even a tooth extraction failed to relieve.

Examination.—The patient is a small, poorly nourished man of middle age, who talks rather rapidly and stammers considerably. His face presents a typical peripheral facial paralysis. The wrinkles on the right half of his forehead have disappeared, the right eye does not wink, the right half of the face has lost all expression, the right corner of the mouth droops, while the left is drawn up high. When he attempts to wrinkle his brow the right half remains motionless. Sniffing is only done with the left half of the nose, in speaking only the left half of the mouth functionates, and in an attempt to uncover the upper teeth, only the left side responds.

In an effort to close the eyes, Bell's phenomenon is elicited on the paralyzed half of the face, to-wit: the affected lid fails to completely cover the eye-ball, and, instead, the latter turns upward and outward so as to hide the iris.

The pupils are equal and react well to light and in accommodation. While there is subjective pain in the region of the ear, there is no tenderness over the mastoid, and objective sensory disturbances can not be elicited. No signs of external or middle ear disease can be found. There is no nerve-deafness. The tongue is protruded in a straight line. Taste is markedly impaired in the anterior two-thirds of the right half of the tongue. The post-cervical and inguinal glands are slightly enlarged.

The left thigh is considerably smaller than the right, and its strength is greatly reduced. There is tenderness at the point of exit of the sciatic nerve. When the sciatic is put on the stretch there is some pain. The thigh muscles on the left side are soft and flabby and present distinct atrophy.

On the middle third of the right leg there is an old scar of about the size of a half dollar, which has pigmented edges and a parchment like center, evidently the remains of a tertiary syphilid. There is a distinct perforation of the soft palate, painless, and therefore unknown to the patient, probably syphilitic in origin. The grip in both hands is about equal and normal. Sensation is nowhere disturbed. The superficial reflexes are present everywhere. McCarthy's reflex is absent on the right side. The deep reflexes are normal in the upper extremities. Kneejerk is exaggerated on right side, and considerably reduced on the left side. The Achilles jerk is present bilaterally, but somewhat less marked on the left side. Gait is about normal. Co-ordination shows nothing abnormal. The eye-grounds are normal.

Large doses of mercurial inunctions and of potassium iodid up to 12 drams daily failed to produce any decided improvement during a course of treatment of two months' duration. The only change noted was a disappearance of the pain in the trigeminus region, which can not positively be attributed to the antisyphilitic treatment. The patient has now left the hospital and treatment had to be discontinued.

SUMMARY.

We find in this patient, with undoubted syphilitic antecedents and with the positive stigmata of syphilis, a right trigeminus neuralgia, a right-sided peripheral facial neuritis, neuritis of the left sciatic and left anterior crural nerves. These various nerve affections must be ascribed to syphilis, as we are unacquainted with any other single etiologic factor capable of producing such irregular nerve lesions.

100 State Street.

A METHOD OF TREATING FRACTURES OF THE SUPERIOR MAXILLA.*

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Although the body of the superior maxilla is not frequently broken, the surgeon occasionally finds fractures of the processes as the result of direct violence. The alveolar arch may be broken by a heavy fist blow, and the deformity which results is many times considerable and difficult to maintain in proper reduction. The ingenuity of the operator who treats these conditions in emergency practice is often taxed to the utmost. While it may be necessary for him at times to call a skilled dentist to his assistance, still it will be possible for him to treat nearly all these fractures single handed.

I have previously laid stress on the fact that the oral functions should be maintained in fractures of the jaws. To reduce properly and to immobilize the fragments, to retain the power of speech and the ability to take food, and to avoid the dangers of sepsis by providing for strict oral hygiene, are the conditions which the surgeon must meet.

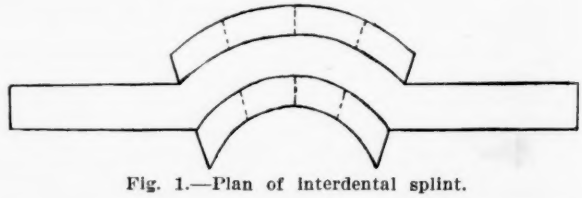

Fig. 1.—Plan of interdental splint.

It will hardly be essential to discuss previous methods which have been employed in fractures of the superior maxilla. While the literature on methods of retention in lower-jaw fractures is voluminous, that on fractures of the upper jaw is most meager and is limited to refined appliances which have been successfully employed by dentists, but which are outside the scope of the general surgeon.

The necessity for a simple, practical method of treatment was made manifest by the following case:

J. M, a laborer, aged 40, was assaulted by footpads. He received a heavy blow directly on the lips from the fist of one of his assailants. He was knocked down and remained unconscious for some time. He did not present himself at my service in the surgical dispensary of the University of California until two days after the injury. When first seen by Dr. Henry Horn and myself he was in a pitiable condition. His upper lip and gums were lacerated and greatly swollen. The upper two middle incisors and left lateral incisor were displaced downward about one centimeter, the alveolar arch being fractured. The teeth were loose in their sockets and the fragment of the alveolus bearing the three teeth could be moved up and down as if on a hinge. There was a large amount of clotted blood about the roots of these teeth.

In such fractures as this, Malgaine's dictum is to be remembered. "In all complicated fractures of the upper jaw," he says, "there is one principle which surgeons can not too much study, namely, that all fragments, however slightly adherent they may be, ought to be

* Read before the San Francisco County Medical Society, 1905.

most carefully preserved, and they will be found to unite with wonderful ease." The advice is sound, for the blood supply of this region is very rich and the vitality of the bone is great. Although necrosis of small fragments sometimes takes place, it is the exception and not the rule. We, therefore, determined to save the much displaced teeth and the alveolar fragment.

The patient was given an anesthetic, the fracture reduced and a temporary dressing applied. This consisted of an interdental portion, made of a thin, narrow piece of wood, maintained in position by dental compound molded over the incisor teeth and supported by the headpiece to be presently described. This held in position very well, but was replaced on the next day by the permanent apparatus.

This splint consists of a head piece, which is the suggestion of Dr. Horn, and an interdental plate of aluminum, the two parts being united by means of two strong rubber bands. The fracture is held reduced and an out-

Figure 2.

line of the curve of the upper teeth obtained. This is best accomplished by making an impression in dental compound, softened by immersion in hot water. Sheet aluminum of No. 20 thickness is then taken and the pattern (Fig. 1) laid out on it. The curve corresponds with that of the incisor and canine teeth, and the width should be a little greater than the widest part exhibited by the impression. The two lateral arms are one centimeter in width and four centimeters in length and emerge from the body of the splint at a point about opposite the canine and bicuspid teeth, the object being that these arms shall not exert pressure on the corners of the mouth.

The splint is then cut out by means of a pair of heavy shears. The lateral pieces are cut, as shown by the dotted lines, so that they may be turned up, thus forming the sides of a narrow curved gutter. Before this is done, however, it will be best to reinforce the apparatus by an extra piece, cut so as to conform with the base and arms of the splint. Over this extra piece the side pieces can be easily turned up by means of a pair of small pliers. The base can also be reinforced by a piece of heavy wire, bent so as to conform with the posterior curve of the splint. The tops and sides are then trimmed and the reinforced arms protected by wrapping with narrow adhesive plaster. The sides of the gutter should not extend so high as to interfere with the gums.

The head piece is made of heavy wire or whalebone, neatly shaped. It should be well padded and wound with adhesive plaster or a narrow roller bandage. The band is prevented from slipping downward by means of two strips of muslin bandage, crossing at right angles. Two heavy rubber bands are looped over the head band so that they run just to the outer sides of the eyes.

The interdental splint is placed in hot water, and the gutter filled with softened dental compound. It is then clapped on the teeth, pressed up firmly and maintained in position by slipping the rubber bands over the projecting arms. There is a tendency for the head piece to work forward, and this should be guarded against by fastening a bandage to the band above the occiput, then carrying the ends down and tying them securely well under the chin. The elastic pressure is most satisfactory. The splint does not loosen and has given us no trouble. The interdental gutter may be carried back beyond the projecting arms, so as to embrace all the upper teeth if desired.

The progress of this case was excellent. The mouth was kept clean by an antiseptic solution and the splint was frequently removed and cleaned by boiling. Union was found to be quite firm in twenty days and the patient was discharged five weeks after beginning treatment.

751 Sutter Street.

AN AMERICAN MEDICAL ASSURANCE.

W. P. WHERY, M.D.

FORT WAYNE, IND.

There are three chief purposes subserved by the American Medical Association—the advancement of science, the promotion of sociability, and the strengthening of the material interests of the members of the profession. The first purpose is accomplished with much success by the activities of the Association and its subordinate societies. The second purpose is inevitably aided by the meetings that are so frequently held and so well attended. But the third purpose, so far as collective action is considered, is generally neglected except by a very few local associations.

It is self-evident that any plan that improves the financial welfare of physicians and that has the aid and sanction of the American Medical Association must conduce to the creation of strong fraternal relations among the members and thus consolidate the Association itself. The feeling of brotherhood would be quickened by the knowledge that the misfortunes of our fellow-members are not matters of indifference to us, and that we, as an Association, are willing and able to furnish means of alleviating some of the unhappy experiences that may come to a worthy physician in the course of his life.

The foregoing are some of the reasons for suggesting that the American Medical Association should sanction the institution of a life-assurance company of strictly

first-class character and operating all over the United States and Canada. This company, in its articles of incorporation, should devote 4 per cent. of its surplus profits to form a medical benevolent fund for the benefit of deserving members of the Association who are unfortunate. The British Medical Association has a benevolent fund that is often of much service to members, and which acts as a bond to hold the units of the association in fraternity. This fund should be placed in the direction of three trustees, elected for six years by the Association, which should also fill all accidental vacancies in the board of trustees. There should be an election of one trustee every two years at the general session. The local societies may voluntarily aid distressed members by helping to keep up insurance, or by providing small annuities, etc., and the trustees of the fund may contribute something in aid of the local efforts. Members who are provident enough to insure their lives would naturally have the preference in receiving aid from this benevolent fund.

In starting the assurance company certain principles should be kept prominently in view. It should be a first-class company in every respect, and should be based on the most approved statistics and conducted according to the best methods. The medical profession possesses much valuable experience in relation to life insurance, and it could be utilized here. The company must have all the elements that will make it a certain success, and it should be formed on conservative lines so as to secure the patronage of the profession generally and the public at large. The company suggested, through the support of medical practitioners in every locality, would be enabled to operate in an economical manner, saving the enormous cost of advertising, fees to agents, expensive building and lavish display; the extra profits resulting from these savings should be applied for the benefit of policy holders, either by reducing the premiums or by increasing their dividends. The very best expert assistance should be secured, both in drawing up the constitution of the company and in managing it. It should be a mutual company, in the sense that policy holders should share in its profits.

The philanthropic feature must not dominate the company, which, to succeed, must be a business conducted on purely business principles. It can be chartered in any state, but should prefer a state that has strict insurance laws. Every possible security should be given save increasing premiums in proportion to the advancing age of policy holders who have long been holding insurance. On the contrary, there should be a plan to make the payments less onerous to those who have carried a policy for many years. There should be as favorable options as are offered by any company, and endowments and annuities should be given. There should be no freezing out of policy holders nor any calculation to make increased profits by dropped policies. Policies should be non-forfeitable after the first year. The company should offer the best and lowest rates that are compatible with a perfect assurance. Young members of the profession and medical students should be encouraged to take out policies, and every member of the profession should constitute himself an agent of the company to assist in securing for it a large and profitable business.

The plan of organization is for three or more members of the Association to secure comparisons of the constitutions of some of the best companies, and with expert assistance, to draw up the constitution of this company. Then they should secure a charter, paying the expenses by an assessment of themselves. They should take power to issue stock, the amount at first not too large, with power to increase it. Four per cent. of the stock should be devoted to the benevolent fund; the majority of the stock should be held by members of the American Medical Association and the stockholders to pay 25 cents on the dollar to form a fund for beginning operations. For the first year 70 per cent. should be allowed as commission on new business, to be turned into the expense fund. After the first year, agents should be allowed a reasonable commission, and physicians may be agents. Competition with other companies should be avoided, but an energetic canvass by the agents is desirable. There are new life-assurance companies being organized every day, and the one now proposed has as fair a field as any, and it may easily command all the capital that is needed to make it a going concern and one that promotes the common interests of the public and the profession.

THE ETHICS OF PHARMACY.*

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It is rather a peculiar feature of life that some of the best advice we get is from those who know the least of what we do. The charming sarcasm of Pinafore in the representation of Sir Joseph Porter, K.C.G., at the head of the British Admiralty is only excused by the truthfulness of the application. Many of our great secretaries of war and of the navy have been ignorant of the principles of land and sea warfare. Some of our great presidents have known nothing of statecraft on their accession to office; great lawyers often do not know how to draw a will, and great physicians have been among the most distinguished legislators of the world. It is perhaps, therefore, not entirely amiss to have an address on the ethics of pharmacy from one who is not in the profession. A man who stands by at a game of chess sees the brilliant move which would gain the victory, which the master overlooks, and from the external viewpoint the non-professional may have a clearer idea of relations than one on the inside.

The profession of pharmacy has become more and more a truly scientific vocation. In nearly all the states, those who enter on this profession are required to secure a license, just as in different communities the physician must qualify before a competent board. Schools of pharmacy have been established in almost every state and territory where young men may have the opportunity to prepare themselves for the important and responsible duties connected with their business.

In speaking of the ethics of pharmacy, therefore, I shall regard my subject largely in the scientific rather than in the commercial aspect. I realize as clearly as any one can the fact that people do not enter professional life as a rule, from mere sentiment or mere love. Most of those, and perhaps fortunately, who engage in professional life have no fixed income and must depend on their professional services for their living. I, therefore, am not one who looks with contempt on the commercial side of the profession of pharmacy. Its

* Address delivered at the graduating exercises of the National College of Pharmacy, 1905.

existence depends primarily on its bread-winning opportunities and when discussing the ethics of pharmacy the fact that it is a money-making profession, or at least should be, ought not to be forgotten.

I am not one of those who believe that endowed science is always the best kind, but in all scientific pursuits, the spur and the whip, and the necessity of putting a little money in the purse, are useful not only for the purpose for which they are intended but also from the purely scientific aspect of the case. It is, therefore, not at all surprising to find in such professions that the best code of ethics, when followed out, is likely to lead to the greatest pecuniary gains. I shall not go to the dictionary either Greek or English, to quote you the definitions of ethics. For our purpose, it is sufficient to know that ethics include simply the proper conduct of affairs. Granting this as the basic principle of the discussion of ethics in the logical development of this subject, it is necessary to see the definite classes of relations which the pharmacist bears to the community. A simple analysis of these conditions shows that there are three important and separate interests with which the pharmacist holds intimate relations:

First. Those of his own profession;

Second. Those of the great medical fraternity, and

Third. Those of the public.

In order that this address may possess some unity of structure, I will briefly discuss the ethics of pharmacy in these three particulars. I wish to say, however at the very outset, that I have nothing at all to offer in relation to that part of the business of the pharmacist which relates to dealing in articles not remedial in their nature. I well understand the fact that it is very probable the belief in the potency of drugs is greater than their merits warrant. The very moment any disturbance of the physical functions occurs, the tendency is to "take" something, usually without much discrimination as to what it may be. There has undoubtedly developed in this country and in other countries in the last few years a distinct drug habit which is certainly reprehensible, and ought to be corrected, but unless we make light of the results of experience and of scientific inquiry, we must admit the potency and usefulness of drugs. In the last few years, the whole science of physiology, and with it pathology, has received a new light from the researches made by the chemical profession. We have seen gradually crumble and decay the old theory of the mysteries of vital force. We have seen formed and strengthened the idea that the growth of a living body, its functional activity, its diseases and decay are due to certain reactions which go on within the body, which are purely chemical in character. The principles of physical chemistry explain the last of the mysteries of so-called vital activity. Thus, having established the doctrine that these changes in the body are strictly chemical in their nature, we have laid broad and deep the foundation which justifies the use of drugs.

Perhaps one simple illustration of this principle may be of use, namely, the injection of saline materials in certain disturbed and weak actions of the heart for the purpose of stimulating this organ and with it the general cellular tissues of the body. The good effects of these drugs are based on indubitable chemical principles which it is scarcely in place to outline here. I will admit without question that up to the present time and even at the present time the use of drugs is largely empirical. It is not always possible for the physician to foretell nor even to foresee the effect of some of the drugs he administers, but there are large classes of remedies of which this is not true; remedies which have a specific physical and chemical action, which is well known, and the variations from which are determined by the idiosyncrasy of the patient himself. This class of remedies forms the bulwark on which rest the great professions of pharmacy and therapeutics. In general it seems to me, therefore, that the relation of pharmacists to the profession itself may be defined in a few words, namely, that the pharmacist should only keep and dispense those remedies whose standards are fixed by the acknowledged authorities of his profession and which are of the purity and strength required. In this case, the pharmacist depends largely on the manufacturer, and it seems to me the duty of the profession to itself as a profession to patronize only those manufacturers whose wares are of the quality and strength specified. In other words, the ethics of pharmacy require that the pharmacist should keep in stock and sell only preparations which are pure, which are true to name, which are unadulterated and which are of the strength and quality required.

This leads us to the discussion, briefly, of one of the great temptations to which the pharmacist is exposed very frequently in this respect. It may be represented to him that a product which is not that which is required in a given instance is described as being of the same quality and usefulness and as serving the same purpose and, therefore, as being a wholly proper substitute therefore. Since it can be offered at a very much reduced price and sold at the same price as the genuine article, if the pharmacist is convinced of the truth of the representations made to him, he may fall a victim to this temptation. The very moment that this happens he commits a moral crime which, although in itself perhaps not threatening seriously in every case the health or welfare of the community, opens the door to a series of offences of the same kind, which may end in the total degradation of the character of the wares which he keeps.

This leads us to the second factor in the relations of the pharmacist to his professional brethren which is of a very important character, namely, that for the sake of gaining trade it is highly reprehensible for the pharmacist so to reduce the price of an article as to temporarily make its sale unprofitable with the hope of establishing a trade therein and then raising the price to the profitable basis. Such practices as these are simply introducing into pharmacy the principles of the great trusts, which, by reason of the funds at their command are able at will to depress the price of a commodity below the point of profit and thus to crush and eradicate the weaker competitor. The very moment that the pharmacist depresses his prices below the point of profit he enters on a career which threatens the existence of his profession. Better far to have no trade at all than trade of this kind. Naturally, there is another extreme in this matter which must also be avoided. That is a union of pharmacists or an agreement between them to raise the prices to an unwarranted extent beyond the point of reasonable profit. Such a practice is just as reprehensible and just as dangerous to the profession as the one just mentioned. I believe in united effort, in organization, whether it be of labor or trade or manufacture, but the object of such organization should always be a legitimate one

and never for the purpose of securing in any way a pecuniary advantage not commensurate with the value of the service offered. Labor should be paid living wages and the laborer should do good service. The trade should make legitimate profits and its offerings to the public should be pure and wholesome. Manufacturers should be able to declare reasonable dividends, by studying the conditions of the market and not by destructive organization eliminating the weaker competitors, and their products should never fall below the standard.

I have mentioned only, as you have noticed, the chief points of ethics of pharmacy in their relations to the profession—purity of products, legitimate profits, freedom from debasement and substitution.

The relations of the pharmacist to the physician is perhaps the most important of all from the viewpoint of ethics. One of the most important of these relations is a point already mentioned, namely, to have in his possession only pure and wholesome products, so that when the physician sends his prescription to the druggist written, let us hope, in an intelligent way and by an intelligent man, he may have compounded the article asked for. But the pharmacist should remember that the physician has rights in the community as well as the pharmacist. He has trained himself to be a guardian, as it were, of the public health. The unselfish physician is more inclined to prophylaxis than to therapy. His object is more to conserve the public health than it is to cure the sick. Usually, however, the public does not feel like calling on the physician until it is ill. It pays very little attention to his appeals for sanitary regulations, but is quick to employ him when sickness occurs. If we admit that the physician thoroughly qualifies himself for his profession, that he has the qualifications which every true physician should have, with that high regard for the ethics of his profession which is the salvation of his work, he has rights which, as I have said, the pharmacist must also respect. One of these rights is the one by which he is charged with the care of those who are ill in the community. In this country, however, there has grown up a system of the practice of medicines which is not only reprehensible but thoroughly dangerous. It consists in the concoction of preparations many of which are valuable remedies, which are sold under fanciful names and with no indication of their composition, by means of advertisements in the public journals, directly to the patient himself. Unfortunately the pharmacist is made the instrument by means of which these unethical remedies are supplied. For the sake of a small profit, usually very small which can be made on these preparations, he consents to act as go-between and supplies to the community remedies which should be prescribed by the physician and compounded by the pharmacist himself. In this way, the pharmacist deprives the physician of legitimate practice and, as I believe, with far less profit to himself and benefit to the community than if he absolutely refused to degrade his profession by dealing in articles of this kind. To such an extent has this practice grown that even the physician is almost compelled to prescribe by name many of these articles, the composition of which he himself does not fully understand. Of course I do not include in this category as reprehensible those which are truly ethical that is, those which bear on their label their composition and which are not advertised by the public press or otherwise directly to the consumer. I do not consider that there is a greater evil to-day in our land affecting the profession of pharmacy than those so-called proprietary remedies. I do not deny the virtue or efficacy of many of these remedies, I only deprecate the way in which they are employed. It is with a feeling of humiliation and shame that I look into the reputable magazines and newspapers of this country day by day and see portrayed in picture and headline the virtues of concoctions the ingredients of which are never mentioned. Why, may I ask, should the pharmacist by law be compelled to label a bottle containing opium with a distinctive mark with the word "Poison" and with the skull and cross bones when he opens it to fill a prescription written by the physician, when he is permitted to sell the same substances without restraint or restriction and without mark or name to any citizen who enters his store and asks for a certain preparation under a certain name? There is no justice in such a business. It is unethical in the extreme. It is not treating the medical profession as it should be treated. It is helping to deceive and to defraud the public.

I have sometimes heard objection made to the filling of prescriptions because of the enormous profit which the pharmacist is said to make thereon. Now it seems to me that such an objection is wholly untenable. In making up the prescription, the pharmacist exercises skill which has come to him by long study and experience, which has cost him perhaps many thousands of dollars. Why should he be asked to charge for the prescription only a fair profit on the ingredients which it contains? There is no reason. He is entitled to a just profit and to pay for his skill and experience. The great artist who places on canvas a picture may just as well be required to sell it, for the cost of the paint, of the canvas, of the frame and of the time which he devoted to it. It seems to me that the chief legitimate field for the pharmacist is the prescription field and just as soon as the use of patented and proprietary remedies is eliminated from this land, the pharmacists will find that the total profit which was derived from them was very small, as compared with the sale of ethical remedies which will take their place.

To sum up briefly, the ethics of pharmacy in its relation to the medical profession consists in the training of skilled pharmacists who shall be able to compound in the most artistic way and with the best results to the patient the prescription which the physician may present.

The relations of the pharmacist to the public is the third subject on our list. This has been largely outlined in the previous paragraphs, but there are some special features of the relations to the public to which I would like to call attention.

In the first place, the pharmacist should be protected in his relations to the public as against other branches of trade in the dealing in articles not connected with remedies or prescriptions, but which are by general consent permitted to the drug store. He should be protected in his relations to the people against the dealing of grocers and others in articles which are peculiar to his own business. The mere dispensing of medicines on the physician's order might not be a sufficient business to warrant the highest degree of experience and talent in entering the profession of pharmacy. There are, however, dozens and perhaps hundreds of articles in common use which are commonly found in the drug stores of our country. I may say that among them is one to which I am not particularly devoted, namely,

the soda water fountain but it is one which receives universal patronage. I do not, I hope, convey the impression that the drinking of carbonated water mixed with a syrup and flavored with a fruit, is objectionable. What I do object to, however, is serving to the community those articles which are not of the proper quality. When the pharmacist dispenses artificial flavors and artificial colors to the public under the guise of the genuine article, he is certainly overstepping the rules of ethics regulating his relations to the consumer. Of course, there are objections to the ice cold character of the beverage, especially in the heated months when large quantities of such ice cold drink are consumed, but since I know of no way to raise the temperature of the beverage without disappointing the consumer and injuring the business, I shall content myself by urging on the pharmaceutical profession the necessity of inducing their customers to drink slowly and deliberately, thus adding to the pleasure of the consumer and detracting nothing from the profit of the dispenser. It might be well if above each soda water fountain should be hung a placard, so that all should see—

"Full many a man, both young and old,
Has gone to his sarcophagus
By pouring water icy cold,
Adown his hot esophagus."

Then again, the pharmacist is in many cases an emergency physician. In his studies he must learn the principles of therapeutics and to a certain extent their practice. He must be appealed to from time to time in cases of emergency and accident for immediate help, and, therefore, in his relations to the public he must be so much of a physician as to extend at least the first aid in the way of drugs and remedies and other help.

The pharmacist, finally in his relations to the public, must not allow himself to keep a saloon. There are many of the so-called proprietary remedies, to which I have alluded, in which the principal ingredient is alcohol. God only knows the source of this alcohol, but at least it is a stimulant and an intoxicant. No pharmacist who regards rightly the principles of ethics toward the consumer will sell or keep on sale such beverages. If he does, he should at least obey the laws and take out a license therefor. If, by the rules of his profession or by the laws of the country the pharmacist is not allowed to sell the genuine alcoholic beverages, such as beer, wine, whiskey and brandy, he certainly should not be allowed to deal in any kind of misbranded and perhaps injurious compounds containing practically the same active principles under fanciful, misleading and deceptive names.

Finally, I would say that both the pharmacist and the physician should cultivate the most friendly relations toward each other in their professions. Sometimes each must exercise the profession of the other. Thus the physician, especially in the country, often must exercise the functions of the peripatetic pharmacist. So the pharmacist in the city is often called on to exercise the functions of the resident physician. It is a pleasing fact to know that the great national associations of pharmacy and medicine are drawing closer and closer together and there is no reason why they should not amalgamate into a single body, having for its object the strengthening of the great principles on which the two professions are based and the good of the whole community which they are called on to serve. To this end, I should like to see more and more entering into the schools of pharmacy the elementary principles of medicine, and I should like to see introduced more and more into the medical schools the true principles of pharmacy. There is one science which serves perhaps more than others to bind these two professions together, that is the science of chemistry. The physician first of all must be a chemist and must understand the intricate and wonderful chemical reactions which are taking place constantly in the body, and which, when disturbed, can only be brought back to normal conditions by the supply of proper chemical reagents. The pharmacist must understand first of all the principles of chemical reactions. His profession deals in the source of compounds, not merely of vegetable and animal origin, but covering the whole range of chemical products. Chemistry is the bond, then, which unites these two great professions and I am glad to know that in this school you have had instruction in chemistry which must be of the best. I have known your professor for years and there is no one who stands higher in the profession of chemistry, not only in this but in other countries, than Dr. Hillebrand.

You have now completed the course prescribed for the beginning of your professional career. You expect in this profession to earn a livelihood. To stand well in the community remember that first of all it is the duty of each citizen to be a patriot, to be devoted to his country and its interests, and to this end he can best serve his country by best serving his profession by standing immovably on the principles of ethics which I have briefly set forth. You should resolve that you will do what is right by your profession, by the physician and by the public; that you will never deceive a patron; that you will never take unfair advantage of a professional brother; that you will never put into a physician's prescription anything that he does not ask for; that you will never sell clandestinely to a customer an article which you would not be allowed to sell by its own name. By practicing honesty and industry you will succeed; you will become successful pharmacists; you will become good citizens.

ACUTE EPIDEMIC DYSENTERY.*

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The history of the study of the dysentery bacillus began with the discovery by Shiga, in 1897, of an organism whose presence he was able to demonstrate in every one of a large number of cases of acute dysentery. This bacillus differed from the colon bacillus especially in that it did not ferment glucose with the formation of visible quantities of gas, that it did not produce indol, and was motile only when freshly isolated from the intestine. It reacted with the serum of those sick with dysentery and usually for months after convalescence, and did not react in the trials made with the serum of those who had not had dysentery. There were more than 89,000 cases of dysentery in Japan in 1897, and Shiga has demonstrated that in the majority of these cases the bacillus described by him is the exciting factor.

Following Shiga's investigations, Flexner examined bacteriologically a number of cases of Philippine dysentery and found the Shiga bacillus in all of the suitable cases. Strong and Musgrave also found the bacilli in

* Read before the Lancaster County Medical Society, 1905, and before the Omaha and Douglas County Medical Society, 1905.

many acute and in some subacute cases in the Philippines. Of 111 fatal cases among soldiers, they class 21 as acute specific (bacillary) dysentery, 11 as subacute specific dysentery, and 79 as amebic dysentery. In the same year (1899), Kruse found the same bacilli in Germany and Spronck in Holland.

The investigations made during 1901 were principally carried on by E. B. Vedder and C. W. Duval, working under the direction of Flexner. They found similar bacilli present in the stools in 5 cases in Philadelphia, in 3 cases in Lancaster County Almshouse, and in 14 cases examined in an epidemic at Springside House, New Haven, Conn., where 50 out of 350 inmates were attacked. In the summer of 1902 (under Flexner's direction), Duval and Bassett found similar bacilli in a number of cases of dysentery in a children's hospital in Baltimore. Some of these were cases of dysentery and some were simply cases of summer diarrhea. Park and Dunham and Wollstein succeeded in isolating the bacillus from a few cases in Seal Harbor, Maine, Tuckahoe, N. Y., and New York City. Kruse found bacilli, which resembled the Shiga bacillus, in an epidemic in an insane asylum, but which failed to agglutinate in the blood of animals infected with Shiga bacilli, nor did the blood of these patients agglutinate the Shiga bacillus.

The cultural characteristics of the dysentery bacillus were given quite fully by Shiga in 1898, and are in many respects similar to those of the typhoid bacillus. Vedder and Duval gave some details of methods for obtaining the bacilli from the feces. The bacilli described by Shiga are small, thick rods with rounded ends similar in appearance to the colon bacilli. In cultures they are usually found singly and in pairs. When discovered they may be somewhat motile, but if so the motility is lost after prolonged cultivation on artificial media. Flagella can be demonstrated with difficulty. The bacilli are easily stained and are negative to Gram. They grow in ordinary nutrient media, better in the presence of oxygen. Gelatin is not liquefied. The optimum temperature is about 37 C., but they develop slowly at temperatures below 20 C.

Duval and Bassett recommend collecting the stools from infants on a sterile gauze pad placed, in the usual manner, over the buttocks after cleansing the parts with bichlorid, the pad being retained by a napkin. The stool should be examined immediately, if possible. Stools containing blood and mucus are especially favorable for isolating the bacillus of dysentery. Enough material, usually from three to six loopfuls, is taken from the blood or mucus in the stool to render cloudy about 10 c.c. of sterile bouillon. The dilutions are made in the usual way, after the settling of the coarser particles, by carrying two, four, six or eight loopfuls of the suspension, depending on its opacity, into a second bouillon tube and from this into melted agar tubes from which plates are formed. The most successful plates present from 25 to 200 superficial colonies. The most favorable material is obtained at autopsy, after opening the lower intestine with sterile instruments, by scraping the mucous membrane with a sterile knife; the scrapings being introduced into a bouillon and plated as above. At the end of twenty-four hours' incubation, the first crop of colonies on the plates should be marked off with a blue wax pencil, as described by Vedder and Duval, and the plates returned to the incubator for another twenty-four hours. The second crop of colonies is then examined and those presenting the character of *B. dysenteriæ* are transplanted to glucose-agar. *B. dysenteriæ* is to be sought among the non-gas forming varieties. Duval and Bassett describe the agar plate colonies at the end of twenty-four hours as being delicate and semi-translucent and bluish-white in color; at forty-eight hours, they are more opaque, whiter, of dull reflection and not elevated perceptibly above the medium. Under low magnification, a triple zone is evident. Colonies older than forty-eight hours can not be regarded as readily distinguishable from those of *B. coli*. Five types of the organism have been isolated: (1) The Shiga type, which attacks glucose and no other sugar; (2) the Flexner-Harris type, which attacks glucose, mannite and dextrine, but not lactose; (3) "Bacillus Y" of Hiss and Russell, which attacks glucose and mannite; (4) Duval and Shorer "Bacillus A," which attacks glucose, mannite, and lactose; (5) Duval and Shorer "Bacillus B," which attacks glucose, mannite, dextrine, and lactose. The Flexner-Harris type has been most frequently encountered in this country.

Bacteriologic reports on the investigations of 1903 were made by Duval and Shorer, Wollstein and Dewey, Gay and Stanton, Cordes, Waite, Kendall, Lewis, and Bassett. A pathologic report was made by John Howland, a report on blood reactions by Charles K. Winne, and clinical reports by La Fetra and Howland, Knox, Cordes, Amberg, Freeman, Warfield, Hastings, Reed.

Martha Wollstein also reported on the "Dysentery Bacillus in Relation to the Normal Intestines in Infants." The investigations were carried on in the cities of New York, Philadelphia, Boston and Baltimore under a grant from the Rockefeller Institute. In all, 412 cases were studied, and of these, 279, or 63.2 per cent., yielded the dysentery bacillus. These represent nine separate and distinct groups of cases studied by different bacteriologists, and one group gave as high a percentage as 94 per cent., while in another only 25 per cent. of the cases yielded the organism. This, however, was in the tenement district in New York, where the stools had to be transported to a considerable distance before being examined and where delay made the isolation more difficult. The same investigators working in Bellevue Hospital found the organism in 65 per cent. of the cases examined. The character of the stools was reported in 397 cases, and of these 120 were composed of blood and mucus, 36 of mucus, 226 of mucus and feces, and 15 of feces alone. The bacillus was recovered from 265 of these stools, from 88 which contained blood and mucus, from 25 which contained mucus alone, from 148 containing mucus and feces, and from 4 containing apparently nothing but feces. Therefore, only 4 successful cases contained neither blood nor mucus. Visible blood was contained in about one-third of the successful specimens. The most successful specimens, then, were those containing mucus and feces. Shiga, Flexner, Kruse, Duval and Bassett and Wollstein have in turn sought the organism in the discharges of healthy adults or children, but unsuccessfully. In 1903, Duval isolated a very few dysentery bacilli from the stools of two healthy milk-fed children to whom mild cathartics had been administered.

Flexner mentions the fact that while infections with the dysentery bacillus in adults often extend with epidemic severity, the cases of infection in children seem to be examples of individual inoculation, although occasional examples of contagion from child to child and sporadic infection among adults does occur. It can only be conjectured whether the bacillus gains access to the

intestinal tract with milk, water or other substances. It may possibly exist as a saprophyte in the intestinal contents and become parasitic only after repeated insults to the mucous membrane. Flexner considers it possible that two modes of infection may occur, autoinfection and "extra-infection." Most of the infants whose stools were examined and who were not in hospitals and institutions had been given unboiled water, but the organism has not been isolated from water.

Shiga tested the agglutination reaction with the blood serum of something more than 100 persons who either had dysentery or were convalescing from it, and found that in most cases, after a week or ten days, dilutions of 1 part of serum to 30 of water gave agglutination, and often 1 part to 50 or more. The reaction was absent with persons who had not had dysentery, but with convalescents the reaction remained over a varied length of time, in one case as long as eight months. Shiga was disposed to regard the occurrence of the agglutination reaction in even those low dilutions as of great diagnostic significance. In summing up his remarks on this subject, he said: "*B. dysenteriæ* is agglutinated only by the blood of dysenteric patients; never by the blood of those sick with other diseases or of healthy individuals."

These conclusions were apparently confirmed by findings of Kruse, Flexner, Strong and others. Lieutenant Strong tested his Manila bacillus with serum from 100 individuals, of whom 12 were well and the others suffering from various disorders. The result showed a partial reaction in the case of one healthy individual and a positive reaction in one surgical case, a 1 to 10 dilution being employed and observation made at the end of thirty minutes.

It came to Dr. Park's notice that in some instances the bacillus did react with the blood of non-infected persons in fairly high dilutions, and he suggested that I investigate this phase of the subject. The bacillus was tested with the blood serum of 114 patients in Bellevue Hospital and the dispensary of the University and Bellevue Hospital Medical College. The bacilli employed were from Shiga's Japan (alkali type) and Flexner's Manila (acid type) cultures. Dilutions of 1 to 10, 1 to 20, 1 to 50 and 1 to 100 were employed, and the average time of observation was from two and one-half to three hours. An attempt was made not only to signify the presence of a reaction, but to indicate the degree of completeness of the clumping which occurred. It was found that in all cases of infants under one year, there was a complete absence of reaction, except in one case of a 10-months-old child where very slight clumping occurred in a 1 to 10 dilution. In all cases over one year, clumping occurred in some dilution. The conclusions[1] were to the effect that the serum of non-dysenteric adult persons does agglutinate the bacilli frequently in a 1 to 20 and some in a higher dilution; that the agglutinating power is wanting in the blood of non-dysenteric young infants (under one year); that the Shiga type clumps a little more readily than the Flexner type, and that a decided and prompt reaction in dilutions of 1 to 20 or higher in infants under one year and in 1 to 50 or higher in older persons who have not recently suffered from intestinal disease is probably pathognomonic of acute epidemic dysentery.

Among the conclusions reached by Dr. Flexner, after surveying the results of the investigations of 1902 and 1903 in this country, are the following:

1. The *B. dysenteriæ* can be isolated from the intestinal discharges, and the intestinal mucosa of a large percentage of children suffering from the diarrheal diseases prevailing along the Atlantic seaboard of the United States during the summer months.

2. The bacillus is to be sought, especially in the mucus thrown off by the intestinal mucosa and in the substance of the mucous membrane itself.

3. Blood admixture makes the isolation easier, as it generally indicates severe infections.

4. The number of colonies recoverable has some relation to the severity of the lesions and the symptoms.

5. The number of colonies obtainable is usually far below the number of colonies of the ordinary intestinal bacteria which develop on the plates.

6. The type most often found is the so-called Flexner-Harris organism.

7. Types of *B. dysenteriæ* of less well-established properties have also been encountered.

8. The blood of the children suffering from diarrheal disease agglutinates at times the bacillus of dysentery in high dilutions; but this agglutination by the blood does not proceed hand in hand with the occurrence of the bacillus in the intestine. The agglutination reaction is not to be treated as an index of the presence of, or infection with, *B. dysenteriæ*.

9. The close association of *B. dysenteriæ* with the intestinal mucosa, the increased numbers of the organism found under definite pathologic conditions, the established pathogenic action of the bacillus for human beings, and the specific blood changes met with in many of the cases of diarrheal disease, all speak for a relationship of cause and effect between the bacillus of dysentery and the lesions of the intestine.

10. It is probable that *B. dysenteriæ* appears, at times, among the saprophytic bacteria of the contents of the intestine.

11. The contagiousness of bacillary dysentery among adults and the rarer instances of diarrheal contagion among children prove the necessity of recognizing an "extra-infectious" origin of the disease.

12. The possible action of any of the many bacteria of the discharges, including the streptococcus, is not excluded by the special findings of the investigation.

13. The central fact brought out by the collective investigation is the frequent occurrence in the diarrheal diseases of children of a specific micro-organism, which hitherto has been held to be of special pathogenic action in human beings, and to be the cause of that form of dysentery among adults and children which is characterized by necrotic and pseudo-membranous lesions of the intestine and marked infectiousness.

14. The lesions of the intestines observed in the children who succumbed to the diarrheal diseases treated of in the reports were very varied in character, but there were rarely found among them the particular kinds of pathologic changes which characterize pseudo-membranous entero-colitis.

Dr. Holt, in reviewing the results from a clinical standpoint, mentions the following points: 1. Infection with the *B. dysenteriæ* occurs under quite a wide variety of conditions. It is seen in breast-fed infants as well as in those artificially fed. 2. It occurs as (*a*) an acute primary infection in children previously well; (*b*) as a subacute infection without previous acute symptoms; (*c*) coincident with or following other acute diseases, such as measles, pneumonia, etc.; (*d*) it is often

1. Medical News, Dec. 3, 1903.

seen as a terminal infection in children suffering from extreme malnutrition or marasmus. 3. It occurs as a mild intestinal disorder with few symptoms, and these hardly more marked than those belonging to intestinal indigestion; also with local symptoms of considerable severity, yet with very little fever or constitutional depression, and finally, in its most severe form, with both local and constitutional symptoms of great severity. 4. It is not a disease of any one locality, having been seen with great and about equal frequency in all the large cities in which investigations were carried on, the only variation in type being that in the warmer cities the proportion of severe acute cases was rather larger. Nor is the disease one of tenements and hospitals, a number of the cases observed being in children living in the best surroundings, even in the country. In its prevalence, it appears to be as widespread as are summer diarrheal diseases.

The clinical reports include observations on 237 cases, and of these 26 children were previously breast-fed. Most of the breast-fed infants exhibited a milder type of the disease than the others. Of the cases studied, 91 were classed as examples of severe infection. These were characterized by much mucus and generally blood in the stools, usually fever, but not always high, and by marked general prostration. There were 81 examples of moderately severe infection, in which there was much mucus, and often blood in the stools, some fever, but not much constitutional depression. There were 63 examples of mild infection, in which the constitutional symptoms were very few; blood was seldom present; there was little or no fever; but the stools almost always contained mucus. There was only one case which at all approached the type of cholera infantum. Seventy-three of the 237 cases were fatal. In the matter of diet, there is some difference of opinion as to the desirability of withholding milk in cases of moderate severity. The intelligent use of milk seemed to give much better results than the substitutes usually employed. In some cases the infection is slight, while the digestive disturbance is severe. On the theory that spreading takes place through the discharges, the Babies' Hospital made a rule that the nurse in charge of the children's napkins should not at the same time have anything to do with the food or feeding.

In all, there were 83 cases in which the antidysenteric serum was employed, and 38 of these terminated fatally. On the whole, the results were disappointing. No unfavorable symptoms followed its use in any case. In only 12 cases did a noteworthy improvement appear to follow its administration. Dr. Holt does not consider that it has been given a sufficient trial. In cases of moderate severity, a dose of 10 c.c. a day is recommended, and in severe cases three times that amount. Of 372 cases studied during the past summer, 73 proved fatal. The antidysenteric serum used was made from horses by the injection first of dead cultures and later of living cultures of the dysentery bacillus. The results of serum treatment were again disappointing, but I have seen no extended account of the investigation. Dr. Louise Tayler-Jones isolated the bacillus from 6 out of 20 cases of dysentery in Washington, D. C., and described 6 other cases as being clinically suggestive of the presence of the bacillus. This proves Washington to be within the zone of distribution.

To epitomize Dr. Knox's experience with serum treatment at the Thomas Wilson Sanitarium, he found it to be of benefit in 5 cases, of doubtful benefit in 5, and inert in 10 of the 20 cases in which it was employed. It seemed to be of more benefit in severe toxic cases than in those of inflammatory type. Most of the cases benefited were those in which comparatively small amounts were given early in the disease. He emphasizes the necessity of promptness in treatment, and goes on to say that if the food can be stopped and the alimentary tract emptied within a few hours after the onset of symptoms, most infections can be aborted. In all his acute cases, milk was stopped for varying periods, and boiled water, with or without egg albumin, dextrinized cereal waters or broths, and later whey was substituted. Gastric lavage was resorted to occasionally and colon irrigation in nearly every case. Calomel or castor oil was given on admission, and large doses of bismuth subnitrate were employed as an intestinal astringent. Opium was sparingly employed. Whiskey or brandy, strychnia, digitalin and atropin were found useful as stimulants. Of 14 patients who had been previously fed on condensed milk, 8, or 50 per cent., died at the sanitarium in spite of treatment, while of the 26 cases given at their houses some form of cow's milk, but 8, or 29 per cent., died, 7 were improved and 10 were permanently cured. Of 17 infants under 6 months in Dr. Knox's series, 10 were bettered and 1 improved, while 6 died, a mortality of 34 per cent.; but of 18 infants between 6 and 12 months of age, only 8 were better, none improved, and 10 died, a death rate of 55 per cent. This difference he attributes to the fact that the untoward effects of improper artificial feeding are most in evidence in cases with weakened constitutions, rickets and the like, during the second half year of an infant's life. Of the 18 children older than one year, but 1, aged 13 months, died.

THE COMMERCE OF SURGERY.*

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"It is further to be observed that just as the self-assertion necessary to the maintenance of society against the state of nature will destroy that society if it is allowed free operation within, so the self-restraint, the essence of the ethical process, which is no less an essential condition of the existence of every polity may, by excess, become ruinous to it.

"In a large proportion of cases, crime and pauperism have nothing to do with heredity; but are the consequence partly of circumstances and partly of the possession of qualities which under different conditions of life might have excited esteem and even admiration. The benevolence and open-handed generosity which adorn a rich man may make a pauper of a poor one; the energy and courage to which the successful soldier owes his rise, the cool and daring subtlety to which the great financier owes his fortune may very easily under unfavorable conditions lead their possessors to the gallows or to the hulks.

"Unless a man's inheritance from the ancestors who fought a good fight in the state of nature, their dose of original sin, is rooted out by some method at present unrevealed; at any rate, to disbelievers in supernaturalism, every child born into this world will still bring with him the instinct of unlimited self-assertion. He will have to learn the lesson of self-restraint and renunciation. But the practice of self-restraint and renunciation is not happiness, though it may be something better.

"One of the oldest and most important elements in any system of government is the conception of justice. Society is impossible unless those who are associated agree to observe certain rules of conduct toward one another; its stability de-

* Read before the Illinois State Medical Society, May, 1905.

pends on the steadiness with which they abide by that agreement; and, so far as they waiver, that mutual trust which is the bond of society is weakened or destroyed."

Evolution does not necessarily involve perfection, it involves remodeling; but its upward or downward tendency, depending on many conditions, will have to be judged by posterity. Many movements are undoubtedly retrogressive; there is more or less pain and suffering for us all. Error, which is not pleasant, is surely the worst sort of wrong. One man fights out the struggle for existence like a barbarian, a more enlightened one devotes his best energies to setting limits to the struggle. Science demonstrates to us that in prehistoric times man, like other animals, spent his life in struggle with his enemies and in competitive preying on the weaker and less cunning, who went to the wall, though these latter may have been the best. Perpetual war was the normal state of existence. The history of society is a record of the attempts of our race to escape and to enjoy happiness, and of all the successive stages of society that one is the most perfect in which the war of one against the other is most limited. To seek the common weal as much as his own is the matter of the ideal of the most perfected type of man and an essential part of his own welfare.

These quotations from Huxley are intended to place you in a mental attitude which will allow you to view the subject judiciously, without prejudice and without rancor. The matter is certainly one which deeply concerns our profession at present. We physicians, it is said, are no less deeply stained with the supposedly unfortunate taint of commercialism than our brethren, whether they be professional shopkeepers or artisans. The coin is supposed to clink melodiously to many in our ranks and, with the strenuousness of all Americans, we possibly are rushing the financial issue with undue ardor. This is to be no lugubrious address, filled with pessimistic forebodings, but a statement of facts bearing on the issue suggested by its title. To make the matter plain we will put the question plainly, and say:

Does the commercial attitude of the present day American physician interfere with his efficiency or with the progress of the medical profession? Does it lower the standard of the profession before the world and if so, wherein are we at fault and what is the remedy?

Without admitting that physicians are unduly commercial, a phase of the subject which we will discuss presently, it may be stated without fear of contradiction that the efficiency of the medical man was never more evident than at the present time. Never was greater industry or more strenuous effort displayed by any profession, never were more arduous labors performed, never were more sacrifices endured, never was more proficiency advocated and never were more glorious results obtained. The magnificent advance of the art of surgery has blazed the way, and has made possible the solution of innumerable problems by our associates in other departments of the profession, and if the sum total of human happiness is to be measured by the saving of life, then, indeed, should modern surgery be honored and its masters revered!

What concerns us most at present, however, is the part that so-called "commercialism" is playing in the development and efficiency of our art. Primitive man knew no further than the display of his self-assertion in grasping that which suited his fancy or gratified his senses. He slaughtered his neighbor that he might gain his possessions. As soon as his perceptive faculties become developed the babe of to-day grasps that which excites his desires and that inherent desire of possession and enjoyment underlies our very nature—a legacy of man's continual struggle with the forces of nature. In the evolution of society, it becoming evident that unlimited gratification becomes destructive to happiness, we have learned self-restraint, but the old instinct, though skilfully concealed, continues to guide the actions of many. Pelf, power or position is the mainspring which guides progressive man, and ambition, the underlying instinct of normal, active man; he who possesses it not is intellectually dead, or degenerate, or abnormal. To a greater or lesser degree we are all continually struggling for gratification, which, if allowed sway would logically bring us to destruction; and, hence the experience of danger, as noted in the history of our race, has brought us charity, humanity and religion instinctive of self-preservation, in the sense that they prevent the disintegration of society.

Physicians are no more exempt from the inborn desire to possess than other classes of society, and to this attribute is due much of their activity and success at the present time. Remove this motive, give them all they can enjoy, and their efforts would cease and the wheels of medical progress would rust. It is all well to talk of charity and humanity as incentives, but these alone would never suffice. The history of medicine shows this but too plainly.

From time immemorial, to our knowledge many centuries before the Christian era, certain individuals in all societies were recognized as healers of the sick. Our ancestors of those days were nothing to boast of. Probably from the sacrifices imposed on them and transmitted to the present, arose the idea, so difficult to eradicate, that the practice of medicine bears its own reward, in the satisfaction of its devotees in giving their knowledge for charity and humanity. "For thousands of years, the waters of the Ganges have been curing the Hindoo natives and for thousands of years the Brahmans who live in the shadow of the temples of Benares have been chanting the same conjuring formulas, the words of which have not even been changed" (Dr. Paul Bruzon), and ever since the plague has been decimating the ranks of the populace, "The superhuman inertia of their faith opposing all modern progress." "The medical student must abstain from all sensual desires, from anger, from dancing, music, quarrels and games." Even though pestilence and death walk among them unheeded. But even then, thousands of years ago, we see the footprints of boodle, for in spite of the oath of "The Charaka" the students were expected to propitiate their masters by presents of land and gold and cows, horses and rice. And as among the Hindoos so through all ancient tribes of which we have record, the healer's art was supposed to be practiced by conjurers, sorcerers and exhorters without compensation, though it became a matter of history that to cast out the evil spirit from the body of the rich native took many days and a great expenditure in sacrifices of gold and horses and cows, and, probably, because of the lack of fees and definite compensation, botanical gardens and temples of medicine fell into ruin. King Solomon of old, who was a great physician, did not charge his patients, but the mendicant practitioner who succeeded him held out his hand and so did the barber of a few centuries ago, while it is reported that the itinerant surgeon of that era always managed to get away with much stuff if the patient survived.

When scientific medicine became established, that is, when dissections were recognized as essential and physiology was placed on a firm basis, physicians began to expect definite remuneration, though its amount was

ago, when my father visited Nélaton, in Paris, each usually left to the generosity of the patron and was largely influenced by the results obtained. Fifty years patient placed his honorarium on the mantel before retiring and pennies and gold pieces were raked in without question as to the standing of the giver. Even to the present day the *"nach belieben"* of the German, and the *"comme vous voudrez"* of the French are still somewhat in vogue and it is not unusual for physicians to delay the sending in of their accounts for several years. The English and Americans were among the first to make it plain to their patients that a definite amount was expected and now they have taken the matter entirely into their hands until the practice of medicine and surgery has in many cases become a business transaction, with "pay on the first of the month" as its guiding motto. Surgeons are even more commercial and many real modern gentlemen of the knife demand pay at the time of rendering service, which, in view of many circumstances surrounding operative work is perfectly legitimate and a matter for each to decide; it should not be subject to criticism and is no concern of others among their fellows. Call it "prompt collection" or "commercialism" if you will, it is a personal matter and does not involve any factor calling for discussion.

Different, however, are practices prevalent among surgical men undertaken with a commercial object in view, which tend to lower the general standing of the profession before the public or to lessen the dignity or self-respect of our individual members. Before entering on this phase of our subject, however, it may be proper to explain briefly why it seemed best frankly to choose this subject for an address, in spite of the many warnings of possible mischief which open statements might entail. A long life of earnest professional labor entitles me to the credit of proper motives, while a careful consideration of present conditions in this regard makes it evident that truthful, unbiased statements, presented in becoming spirit, may assist in preventing much feeling and tempestuous discussions in the future.

Never have the prospects of our great profession appeared brighter, never has our organization reached such high degree of perfection and yet seldom have we seen so much disturbance and personal feeling created as by this question of commercialism among surgeons, until it threatens to undo the efforts of years in making our work effective. To fulfill our destiny as the greatest of all professions, which it is bound to become, we must acquire power, and to gain the latter we must perfect the centralization of our organization, but we must do this with perfect regard for the referendum, which calls and always will call for sufficient publicity among ourselves to attain harmony. It has also been said that open statements of our frailties might attract the attention of the public and discredit our calling. This in my opinion is sheer nonsense and simply indicates the sensitiveness of some of our members. The mass of our men have always stood for frank statements and no evasions, strong in the knowledge that for labor done and results obtained the physician can stand out in the open. I will only dwell long enough on the story of our weaknesses to demonstrate the logic of the conclusions. I have prayed earnestly for guidance to enable me to be tactful, with the hope of throwing oil on the troubled waters.

Remember that "evolution does not necesarily involve perfection; it involves remodeling, but its upward or downward tendency, depending on many conditions, will have to be judged by posterity. Many movements are undoubtedly retrogressive; there is more or less pain and suffering to us all; error which is not pleasant is surely the worst sort of wrong." To desire to make money is a natural instinct of man; money buys bread and if associated with merit and ability it buys power and position. A German writer by the name of Zimmerman, has just edited, in Berlin, a book in which he says that Americans are utterly sordid and egotistical, depraved and without heart and unable to grasp the conception of an ideal. In answer to such absurd statements, it may be asserted as a provable proposition that commercialism and idealism are not incompatible and that the most vulgar forms of the former have frequently been associated with actions indicating the highest type of ideals. In spite of its commercial supremacy, which to a great extent is the result of surroundings and circumstances, America as a nation, in its past history, in its development and in its present position among other nations, stands as the ideal of the human family. And so it is with our profession. Whatever there may be of commercialism among our individual members, it is mostly the evidence of the making the most of presenting opportunities, due to the common instinct of all mankind in its struggle for existence, and is in no way incompatible with the highest type of idealism. How possessions are gained, how expended, this is the vital qualification. What might be termed improper commercialism by a physician implies not the desire to obtain money or its possession, but the use of improper methods, producing injury to the patient or to the community, to his fellow, or to the profession at large.

There is little to be gained by analyzing the commercial portion of our work in order to establish the resulting characteristics of harm; it seems more direct to mention such practices as are claimed to exist among us, which tend to injure our profession, commenting only so far as their gravity and the disturbance they have caused would seem to warrant.

It is rumored that some surgeons perform unnecessary operations or operate too hastily, without careful analytical investigation of each individual case, or operate on patients curable by less dangerous medical methods; that they charge exorbitant fees; that they make false or ambiguous statements concerning suggested competitors, or that they perform criminal and improper operations, and what not. Of course, this is all true. Some men do all these things, our profession is not free from black sheep. There are abortionists and rascals among physicians; there are thieves and lawbreakers recognized at the bar; there are "wolves in sheep's clothing" wearing the cloth, and the realization of a world without these unfortunates is still a hazy dream. Yet, without condoning their offenses before meting out final judgment should we not carefully weigh their respective responsibilities, bearing in mind their organic peculiarities, the incidents of their development, and the trials and temptations surrounding their fall? To take what belongs to another, or even to take life, is not always theft or murder. Apparent guilt only becomes crime when all attending circumstances have been strictly taken into account.

With these reflections on phases of medical frailty and neglect, which are unpleasant to dwell on, and which, after all, in a different aspect are simply peculiarities incident to members of all trades and professions and all walks of life, let us pass to the consideration of another variety of supposed medical misdeeds, which have

really been instrumental in prompting me to choose this subject. I refer to what has by some been called "medical graft." This term has been much in vogue these latter years, and, as usually applied among surgeons, it implies the offering or accepting of bribes between medical men to promote the influencing of patients toward accepting the services of the dividing surgeon irrespective of the quality and value of the services rendered. The progress of the medical profession has been marked by at least the average number of exciting episodes, leading to dissension and it might truly be said that, barring the holy clericals, no peaceful profession is more keen for a "scrap." It is a decade or two, however, since so much acrimonious discussion has arisen among surgeons as has resulted from this source. For a few years past, it has been whispered that the secret of success of certain surgical gentlemen lay in the fact that they "paid commissions" to medical men to divert patients from the direction of the shining lights in the surgical and particularly the college arenas, and this use of money has been characterized as unprofessional, irregular and improper. I will use no stronger terms, as my hope is to appease, not to arouse. The very nature of these practices makes their detection difficult, but there is little doubt that the evil does exist and always has existed, though it is only lately that it has given rise to discussion. If we search the records of antiquity, we recognize that though medicine was practiced by the gods and kings its commercial side was never entirely lost sight of, and the sacred book of Persia contained a fee bill in which the charges varied from receiving a benediction for curing a priest to an ox of the best breed for relieving the heir of a country chief, while the ancient Egyptians before the founding of the school of Alexandria, which might be said to mark the beginning of scientific medicine, allowed certain healers to enjoy a monopoly of the practice; in the reign of Rameses II, an individual was executed for stealing a medical tract from the records of Pharaoh, and ever since there has no doubt been the necessary amount of trading and bartering among us as among all men. "I'll do as much for you as you do for me," however homely the expression, has ever been a universal principle.

This boodle excrescence on the body medical is a non-malignant, heterogeneous hypertrophy, which has become a deformity. Some prominent gentlemen among us have lost their heads about its treatment and by irritation and counter-irritation have produced an ulceration of the outgrowth that has increased its size and rendered it distressing. Like many benign enlargements, it is usually curable; some cases are medical and others surgical, and the symptoms are excessively obscure in the incipiency of the disease. The individuals affected have a forlorn, hang-dog look about them when first afflicted and an uncomfortable feeling of malaise, accompanied by chills and fears, which after proper incubation is replaced by a brazen hue and a cold stare in the established and pronounced form of the disease. It has long existed in the sporadic form, but in late years has become somewhat epidemic. In large and thickly settled communities it affects groups of medical men, guided by a surgical chief, but many smaller towns are absolutely saturated with its pathogenic micro-organism and there is always a virulent outbreak when a metropolitan surgeon comes to the town and operates on a pay patient. The outbreak ends at once if the patient dies, but never completely disappears if the patient recovers.

Neither is the trouble endemic or indigenous to America. It is prevalent in many parts of Europe, but is more restricted there because of the paternal interest which governments take in the profession and its members, by bestowing rank and titles on the deserving, so that the public may know who is who.

Etiologically speaking, it is not difficult to recognize how this commercial taint has lately come to play such a large part in the transactions between physician and patient and between the physician and his fellows. Not more than twenty years ago, modern pathology became sufficiently well established to be recognizable even by the laity as a basis for the intelligent practice of modern medicine and the earnest students of that time, who were sufficiently proficient and possessed the necessary personal qualifications are now enjoying well-deserved prominence. Many men in their prime have seen their progress arrested by this pathologic awakening and many good men, prevented by circumstances from ceasing active work and thus obtaining the time to take up studies on more advanced lines, have been obliged to take second place and have seen younger but more thoroughly drilled men forge ahead of them. Many a venerable and experienced practitioner has to look back to 1880 or thereabouts to note the high-water mark on his ledger. Simultaneously came the activity of the medical school, itself often, and usually, at least in the beginning, a commercial enterprise, and the land became peopled with physicians so that the struggle became still more intense, and then later, not an inconsiderable factor, came the fads, Christian science, Dowieism, faith cures and their ilk, while all this time the great pathologic young Napoleons, specialists in internal medicine, were sitting up nights writing treatises on sanitation and prophylaxis, the questions of modern methods of diagnosis, and the possibilities of the future, but usually winding up with practically an acknowledgment that treatment was not as yet thoroughly successful but that strychnia, nitroglycerin and sustaining remedies were always advisable. Goodness gracious, if antitoxin had not come on the scene how monotonous it would have become!

This is not spoken in derision; I am only trying to depict the position of the good doctors who, by force of circumstance, were halted when the age of the pushing young Vienna man came to pass.

Add to this the cheering knocks of the modern neurologist and the stomach specialist and then take another look at the general practitioner's ledger. Meanwhile, the worst beast of prey of all was leaping along in bounds; it was the surgeon, taking great, big chunks with knife and forceps and scissors, right out of the physician's practice. Said he: "It is appendicitis and needs quick work, but not for you." No more long declines with pain low down: "These ovaries or this womb must out." "That pain below the ribs, 'tis cholecystitis and stones; don't let her vomit so; I'll do a gastroenterostomy." In goes the surgeon, out goes the physician. Quick work; no more lingering cases and fat bills, at least for the physician, who is not young and who never could stop and go to Vienna. Well, they will all turn. They are only men, and like all men driven to bay they will struggle to the end—the eternal struggle of life, and they will take what they can reach and no good man will snarl. This may be allegorical, but it is true.

Times have changed since the reign of Rameses II, and the edicts of Pharaoh are void in this country.

No set of surgeons can long enjoy a monopoly, and it has come to pass that surgeons are jostling each other. The study of that portion of medicine which is called surgery is comparatively plain and, given certain personal characteristics, its practice is reasonably easy. Internal medicine (except to the successful Viennese) is most scantily remunerated; surgery flourishes in a field strewn with gold, and now colleges are practically schools for turning out young surgeons, and many of the commercially inclined schools teach no more medicine than is necessary to pass the state board, while postgraduate schools are institutions where surgical operations are shown at so much a month. Surgeons are, therefore, becoming very numerous and are keenly striving for recognition and a few fleshpots, and the struggles of general practitioners are nothing to what we are to witness in the surgical ring. Already we have the percentage dividing surgeon and the receptive physician. The conditions just outlined and other factors are responsible for their coming. The real study of medicine and surgery, as taught in our best colleges, necessitates such arduous labor that the good students are bound to succeed and can hardly be restrained. Their number is becoming so great, in proportion to the population, that competition is excessive and their desire to become known is so irrepressible that, come what will, and almost unknowingly, they push in paths that lead to the bush instead of the high and only way. If conscience speaks, well, it is business. Hence the commercial atmosphere which surrounds us and threatens to destroy us. The old story, "the self-assertion necessary to the maintenance of society against the state of nature," is carried too far.

Fellow members, in your heart of hearts you know the truth lies in the assertion that the almighty dollar is the prime object in view these latter days, to a greater degree than we of this epoch and our fathers have known, but no more may we add that it is to others outside of our ranks. The whole American nation seems, to the inexperienced mind, to have gone cash mad, and American surgeons to have become tradesmen.

Were this address to stop here it would do the noble members of our body great injustice; still, before filing with you certain statements which are a fitting complement to the rather unsparing criticisms just offered, it seems both logical and becoming to take into consideration the results of our present commercial attitude in its effect on our patients, the more so as this must, in perfect justice, become a major factor in forming proper conclusions.

It is evident that this must to some extent interfere with the efficiency of our service, which for all time has been freely given to rich and poor alike, a sacred pledge, which, it must be acknowledged, has always been faithfully observed by the great mass of our profession; still, it must be admitted that some harm results. This is made manifest in many ways, which I have already mentioned, and all that need be said is that anything that detracts from the ultimate ideal of the true physician's endeavor, namely, the curing and relief of the patient, tends to lower our self-respect and our standing before the community. Yet, in these competitive days, have we not the right, even though we deal with human life and comfort, to look somewhat to our self-protection? To enumerate in detail that part of our subject which refers to individual ways in which commercial ideas may and do interfere with efficiency would not serve our purpose. Enough has been mentioned to show that modern money getting threatens to lower the quality of our goods, and those of you who give this matter the reflection it deserves need not be told how or where, for you all know.

This was a hard address to write and a source of distress to me, and the excuse lies in the thought that it would best be done for the good of us all; that by looking a glaring evil straight in the face we might see our way out creditably before we fall into disrepute. The fault is not ours especially; it is not the physicians only who are reaching out for the pelf, or the power, or the position; it is the preachers and the lawyers and the politicians and the laborers and all the world. It is a part of a universal scramble which is going on in our country, the result of the individualism which unrestrained Americanism and misinterpreted freedom has brought about. We are living in an age of disturbance, with its incident distress, characteristic of evolution or remodeling. There is danger of retrogression unless the mirror is placed before us occasionally. There is no need to become pessimistic, the difficulties will straighten themselves out. In a country with such unrestrained liberty of action as this is, "the insatiable hunger for enjoyment," which must of necessity break out once in a while, will not be allowed to become the agent for destruction of society which some croakers would have us believe; for, though many individuals do not have, the great body has, the conception of justice. In our little medical world, composed of excessively individualized, fearless men, the idea of fairness and the conception of justice is clearly crystallized and, though discussions may and must occur, we eventually come back to the observance of those certain rules of conduct toward one another on which the stability of society depends. Mark, in spite of many of our struggles in the past, how far our organization has progressed, how wide the doors have opened charitably to allow entrance to some who are almost pharisees among us, trusting to the cheering influence of the warmth within to purify them and to fit them for the fold.

Take this matter of commercialism among us—it will settle itself. Decoy traps to catch your brother will only heat the blood. It ill becomes certain men among us, safely ensconced in impregnable positions, to strike so hard on the vulnerable side of a brother who is striving to climb the hill. Better take him by the hand and help him in the ascent. Take this question of division of fees, for example; there is a good deal of it going on, more, probably, than any one knows. It is an undignified procedure and its devotees are not talking much about it, and when covertly charged they change the conversation. The discussion of this matter and of incidents connected with it almost annulled the work of years which had been spent in thoroughly organizing the profession of Chicago. I will go further, at the risk of being anathematized, and ask, "has the practice done so much harm as to call for the most bitter denouncement, and the introduction of punitive measures in our societies and the use of most undignified methods in attempts to abolish it? Does the practice rob the patient or lessen the efficiency of the service he receives? In my opinion it does neither. The practice is undignified, carries its own punishment and will eventually die out, except among a class which will never be reached by either denouncement or punitive resolutions. In some towns it is an established custom, and it is pathetic to witness the struggles made against the im-

portation of a foreign surgeon, by lowering the fees or by offers of division to the attending man. This, again, is an incident in the struggle for existence. Some of these local surgeons are good men, ambitious, striving fellows, well prepared for their work and in every way competent. To see outsiders come and pick the fruit from their own garden walls is more than they can stand, but it is probable that they suffer by their methods and, in a lifetime, lose more than they gain. What about the country practitioner who does not practice surgery—the man who gives hours to the patient and gets dimes, while the surgeon gives minutes and gets gold? I do not know.

Now, I must leave this phase of the commerce of surgery, for I am told by some good friends (none of them make less than $20,000 or $30,000 a year, and who are working harmoniously together in faculty groups) that I am going to hurt myself and fall under suspicion.

Why tarry longer on this unsavory repetition of unpleasant facts known to you all? Following the general trend of our people in the development of excessive egoism we have become commercial to a degree, rather inconsistent with the altruistic characteristic of our calling. From the man who charges $5,000 for aspirating a knee joint or for removing a catarrhal appendix and crucifies the two little fellows who are dividing a $100 fee on the sly for just as good service on a ploughboy, to the one who runs a sanitarium on founders shares, and a salary, we have been losing sight somewhat of the fact that our profession is a quasi-public one, attracting an immense amount of attention, destined to a great future, and that the personality of our membership should not be allowed to deteriorate and that, for the benefit of our society, we should seek to obtain permanency by living in the proper midline between self-assertion and self-restraint. We have little to worry about just now, that is, we surgeons. Business is good and getting better, but let us not forget that good business does not always insure the permanency of prosperity and that there is an ultimate beyond commerce in surgery. It is not our purpose while addressing a special class to charge all others with wrong tendencies, but simply to offer suggestions for reflection. The world is not all bad by a good deal, but on such occasions as this it is proper to point out the swayings of our people in any direction which may seem to indicate retrogression.

The progress of a nation is diversified by movements in which idealism and materialism predominate by turns and just at present in this "age of the hand" and the "rule of the common people," materialism is uppermost and commercial notions prevail. Meanwhile the minority is not idle and restraining influences are at work, which are bound to bring us all back to the middle line. This is the sentiment which has prompted me to address you on this subject. Let us take the highway of progress, drop anarchistic edicts and silence autocratic dictums and punitive regulations. Let us hold before us a rational conception of the future spiritual man and exhibit reasonable discrimination in dealing with such problems as come to us in the discharge of our duties as men and citizens and remember that only "such as are observant, critical and possess great powers of mental representation can adequately discriminate."

Herbert Spencer says:

Altruism includes justice and beneficence. The first implies sympathetic recognition of others' claims to free activity and the products of activity; the other implies a sympathetic recognition of others' claims to receive aid in the obtainment of these products and in the more effectual carrying out of their lives. The highest sort of life, individual and social, is not achievable under a reign of justice alone; with this must be joined a reign of beneficence. The requirements of equity must be supplemented by the promptings of kindness. The battle of life carried on by competition, even within the bounds set by law, may have a mercilessness akin to the battle of life as carried on by violence. Beyond those limits to the actions of individuals which it is the business of the state to maintain, individuals have to impose on themselves further limits prompted by sympathetic consideration for their struggling fellow-citizens.

I am not here to apologize for prevailing forms of commercialism which tend to degrade our calling, and of which we have spoken. I speak for the future, and bespeak an unbiased, calm decision on the best methods of eradicating or minimizing existing evils. A considerable part of these rightly may be attributed to the course of life of the very men who condemn them so strenuously. In the keen competition of the battle of life they have forgotten that for ethical function equity should be supplemented by kindness. Omission and a lack of perception are not commission. Within the bounds of law they have lost sight of negative beneficence. They often began by being commercial until beyond want and now they are moralists. They hold more positions than they can fill satisfactorily; they perform more operations than they can do full justice to, or of which they can overlook the care; they often oppose the rise of their peers and particularly their superiors on their faculties; they boast of their large fees and their annual income, exciting the cupidity of their fellows, all of which is properly within the law, but is an element in the development of present conditions. Add to that the elements which I have shown and you have the reason for commercialism.

All this writing is a plea for the exercise of negative beneficence on the part of our profession in regard to this whole question. While proved violations of the law of ethical conduct should be given publicity and be visited by just penalty, wholesale denunciations should be decently omitted as tending to disorganize our ranks and doing injury to men whose mistakes have resulted from force of circumstances and surroundings and from the strenuousness of the age in which they live. Let those of us who are successful make it our duty to help others to a firm footing beyond the need of dubious methods. To eradicate impure commercialism entirely may be impossible, as it is founded on man's inheritance of original sin and because reasonable commercialism is an incentive in life, but it is not impossible by harmonious co-operation to cultivate a desire for a higher standard, by combining justice and beneficence. The practice of self-restraint and renunciation is not happiness, though it may be something better.

Paper for Dressings.—Olpp writes from China to the *Münch. med. Wochft.* that he has been very much pleased with the very thin, soft, porous paper made there as an inexpensive substitute for ordinary dressings for wounds. He describes how the paper is made from bamboo pulp, and states that he crushes a sheet into a loose, soft wad, applying as many of these wads as necessary after sterilizing them by baking an ovenful at a time. If the wound is suppurating, he applies a single layer of gauze before packing with the wads. The convalescents crush the paper into the loose wads, giving them something to do and think about. He has also found the ashes of rice or other straw, such as the Japanese use, a valuable material for dressings.

Special Article

IMMUNITY.

CHAPTER XIX.

DIPHTHERIA.

The *Bacillus diphtheriæ*, or Klebs-Loeffler bacillus, was discovered by Klebs in 1883, and more fully described by Loeffler in 1884. It answers all Koch's laws in its relationship to the disease of diphtheria. It is a non-motile, rod-shaped organism having about the length of the tubercle bacillus but twice its thickness. It stains by Gram's method, and with the ordinary anilin dyes, and with the special stain of Neisser shows a peculiar granulation, the granules of Babes-Ernst. It is readily cultivated, especially on solid media which contain serum and in various bouillons. It tends to grow in coherent masses and under the microscope the cells often show a characteristic phalanx-like arrangement. One end commonly presents a flask-like enlargement. It is an obligate parasite having no vegetative existence outside the body. It is very resistant to desiccation and may remain virulent in a dried state for from one to five months. Its life in water varies from a few days to several weeks, having its shortest existence in distilled water and its longest in hydrant water which has been boiled. It disappears more quickly from unboiled hydrant water. It is very susceptible to ordinary antiseptics, being killed in a few minutes by corrosive sublimate even in a dilution of 1 to 10,000.

Characteristics of the Organism.

Microscopically and culturally the bacillus of diphtheria can be distinguished with difficulty from a variety of other organisms which belong to the same group, and which are called pseudodiphtheria bacilli. The latter are frequently found in diphtheritic throats, but occur also in the upper air passages and conjunctiva in the absence of all lesions. On the whole they are non-pathogenic, but occasionally a culture is found which causes a subcutaneous infiltration at the point of injection in an experimental animal. Hamilton cultivated one which was distinctly virulent for animals. Their pathogenicity, however, is altogether different from that of the diphtheria bacillus; diphtheria antitoxin does not protect against them nor do animals which are immunized with pseudodiphtheria bacilli become immune to the toxin of diphtheria. The animal experiment is the only positive means of differentiating the true from the pseudodiphtheria bacilli. Some consider them as nothing more than diphtheria bacilli which have lost their virulence. Biologically, however, they seem to be very far removed from this organism. The *Bacillus xerosis*, which is thought by some to be the cause of xerosis conjunctivæ, but which is also found under normal conditions, is a pseudodiphtheria bacillus.

Pseudo-diphtheria Bacilli.

Bacillus Xerosis.

A knowledge of the existence of these organisms may complicate the diagnosis of diphtheria in some cases, but there is little danger of serious error. If one found organisms resembling the bacillus of diphtheria in a membranous sore throat which was accompanied by severe symptoms, there could be no wavering in the decision to use antitoxin.

The sources of infection may be enumerated as follows: 1. From the false membranes, sputum or excretions of the mouth, pharynx, nose, conjunctiva and deeper respiratory passages of the infected individual. 2. From convalescents and those who have fully recovered, even after serum treatment. Virulent organisms may persist in the pharynx or nose for weeks and months after recovery, in one of Prip's cases for twenty-two months. 3. From the upper air passages of healthy persons who may never have had diphtheria, but who have been in direct or indirect contact with the diseased. Kober obtained virulent bacilli from 8 per cent. of the individuals who had been in direct contact with patients, and he states that 0.83 per cent. of the people at large carry with them virulent organisms. This condition may well account for the "spontaneous" origin of diphtheria in the susceptible. 4. From cases of latent diphtheria as represented in chronic pharyngeal diphtheria and in chronic rhinitis fibrinosa.

Methods of Infection.

Consequently infection takes place chiefly by direct contact, but frequently also by indirect contact. Transmission by kissing or by other means of intimate contact, by using infected cups or toys is well recognized. "Drop infection," i. e., from infected globules of mucus or saliva which the patient emits when speaknig or coughing, may occur, but perhaps is not of great significance. The same probably is true of "dust infection," although, as stated, the organism may remain living and virulent in a dried state for a long time. The disease is rarely transmitted from animals to man, although this may occur from the cat, which occasionally suffers from true diphtheria. The diphtheria of fowls is due to another organism.

The upper air passages, more rarely the conjunctiva, wounds and the vulva, are recognized as infection *atria*.

The local and general phenomena of diphtheria are caused by the soluble toxin which the organism secretes. Although the toxin is not absorbed through, nor does it injure the unbroken skin, it produces necrosis of the mucous surfaces and underlying tissue through which it is absorbed into the lymphatic and blood streams. Through the wounded surface also fibrin-forming elements escape, as a consequence of which successive layers of fibrin are deposited; the fibrin, together with the necrotic surface and the leucocytes and micro-organisms which they contain, constitute the membrane.

Pathogenesis.

Characteristically the bacilli are localized at the site of infection. It is generally stated that diphtheritic bacteriemia rarely occurs, but in one instance bacilli were found in the blood and internal organs in ten out of fourteen cases.

Localization of the Bacilli.

The clinical and anatomic conditions lead us to believe that the parenchymatous organs, the lymphatic tissues and the cells of the nervous system contain receptors with which the toxin unites, for these are the tissues which in particular suffer anatomic injury in the disease. When the toxin is injected subcutaneously into animals localized edema and necrosis occur, hence the connective tissue may also take up a good deal of toxin, diverting it, so to say, from the more vital organs.

Mixed infections, especially with the streptococcus, which, according to Baumgarten, occurs in most cases, render diphtheria a more dangerous disease. Roux and Yersin found that the streptococcus increases the virulence of the diphtheria bacillus both in the test-tube and in animal experiments. Furthermore, the situation may be complicated by a streptococcus septicemia, of which acute nephritis and lobular pneumonia may be the direct consequences (septic diphtheria), and in this condition the diphtheritic infection may fall into the background in importance. Post-diphtheritic suppurations commonly are caused by the pyogenic cocci, but sometimes in association with the diphtheria bacillus itself. Rarely the bacillus is found in pure culture in lobular pneumonia, and Flexner and Anderson produced this condition with the organism in experiment animals. In puerperal infections with the streptococcus a puerperal diphtheria is sometimes superimposed.

Mixed Infections.

Very young children resist diphtheritic infection. A certain degree of immunity may be transmitted by the mother. Experiments show that when the blood and milk of the mother contain antitoxin, the offspring acquires some protection, which, however, may disappear after the cessation of nursing. Polano claims that antitoxin passes from the mother to the child through the placenta. From the second to the seventh or eighth year children usually are very susceptible. This susceptibility is not uniform, however, for many children escape infection, whereas others do not under the same conditions. Following this period susceptibility decreases and after the fifteenth year cases are relatively rare. The cause of the immunity which develops without infection has not been sufficiently investigated. In some cases considerable

Immunity and Susceptibility.

amounts of antitoxin are found in the serum, perhaps enough to account for the immunity.

The prolonged presence of bacilli of low virulence in the nose or pharynx, or mild attacks of the disease which have not been recognized may cause the development of antitoxic immunity. As stated in an earlier chapter, the loss of suitable receptors may be a factor in the acquisition of this immunity.

Hypertrophic tonsils and chronic pharyngitis appear to be predisposing causes in children.

Active Immunity.

Spontaneous recovery (active immunity) is due solely to the formation of the specific antitoxin by the tissues of the patient. We may regard the relationship of the leucocytes to diphtheritic infection as not definitely settled. Marked leucocytosis sometimes occurs. Certain observers hold that this condition is an unfavorable prognostic sign, although Besredka and others take the opposite view. An accompanying streptococcus infection may account for a hyperleucocytosis.

The duration of active immunity to diphtheria varies greatly. Usually one has diphtheria but once, yet not infrequently susceptible individuals have repeated attacks. In some instances the susceptibility continues into adult life.

Prophylaxis.

The advent of serum therapy justifies no relaxation in the customary prophylactic measures, such as isolation of the diseased, quarantine and disinfection. A patient should not be considered harmless until his mouth, pharynx and nose are free from bacilli, a condition which may be brought about by antiseptic applications, and for the determination of which repeated bacteriologic examinations are necessary. The danger that others who have been in contact with the patient may carry the infection should be met by appropriate treatment. It is not to be forgotten that antitoxin does not destroy the organisms. The injection of antitoxin is our most effective measure for individual prophylaxis.

Serum Therapy.

The efficacy of diphtheria antitoxin is so well known that little comment is needed. It has caused a reduction of more than 50 per cent. in the mortality of the disease; from 41 per cent. to 8 or 9 per cent., according to Baginsky.

For prophylaxis from 500 to 1,000 units are generally recommended, although some foreign authorities give only 250 units. Rarely, individuals who have received such treatment develop diphtheria within twenty-four hours after the injection. In these cases it is probable that infection has already occurred and symptoms appear before the antitoxin is thoroughly distributed. Naturally one may contract diphtheria after the antitoxin is eliminated.

For curative purposes the amount actually required depends on the virulence of the infection and the duration of the disease. Inasmuch as the virulence may not be known accurately, what appears to be an excess of antitoxin is always demanded. Having in mind the average dose of 3,000 units recommended by the forthcoming United States Pharmacopeia, the physician must be guided by the conditions in the individual case. Less than 2,000 units are rarely indicated, and as many as 10,000 and 14,000 units have been given without detriment. There should never be any hesitation about repeating a dose within twenty-four hours in the absence of distinct improvement.

Ransom and Knorr state that if the antitoxin is given intravenously, which may be done without danger, the action of the serum is about eight hours earlier than when given subcutaneously. In severe and in late cases it is advisable to use this method of introduction, the serum first being warmed to the temperature of the body.

It is probable that few cases are so mild or so hopeless, unless moribund, that the omission of antitoxin is justifiable.

Diphtheritic Paralysis.

The belief that antitoxin favors the development of diphtheritic paralysis is no longer held. If there has been an actual increase in the percentage of cases which suffer from paralysis, as sometimes stated, it is because a larger number of severe cases is saved; and the severe cases are those which most frequently develop paralysis. If we accept the view of Ehrlich that a special toxin of weak affinity for the antitoxin, i. e., the toxon, causes the paralysis we find all the more justification for large doses of antitoxin, for antitoxin neutralizes the toxon as well as the toxin. On the basis of experimental work Ransom concludes: "Transferring the results (of experiments) to practice among human beings, we may expect liberal doses of antitoxin given early in the illness to influence favorably the subsequent paralysis; and this favorable influence is likely to manifest itself, not so much in the local paralyses (soft palate, etc.), as in such fatal symptoms as failure of the heart. Severe cases, however, are likely to be followed by some paralysis in spite of even large doses of antitoxin."

Cases in which there is severe mixed infection, septic diphtheria, respond less favorably to antitoxic therapy than uncomplicated cases. At some time a mixed serum therapy suited to the mixed infection may be possible.

The suggestion made by Wasserman of a combined treatment with bactericidal and antitoxic serums has not been applied practically.

Agglutination Test.

Inasmuch as the serum of the patient does not develop agglutinins, the agglutination test is of no value for the recognition of the disease. If animals are immunized with the bacillus, agglutinins are said to be formed. The serum of such an animal may be used for the identification of a culture made from the throat, but this would have no practical value, for the diagnosis may be established by the ordinary bacteriologic methods much more quickly and satisfactorily. It is difficult to obtain a homogeneous suspension of the bacillus for the agglutination test.

Clinical Reports

STRANGULATED FEMORAL HERNIA IN A MAN OF SEVENTY-FIVE.

RESECTION. RECOVERY.

CHARLES S. WHITE, M.D.
House Surgeon Emergency Hospital.
WASHINGTON, D. C.

The following case presents some unusual features that seem worthy of notice:

Patient.—C. P., aged 75, male, white, farmer, widower, born in Virginia.

Family History.—Parents died, after short illness, of cerebral hemorrhages, but at an advanced age. One brother died of intestinal obstruction, one of sunstroke. Two sisters are dead, but cause of death unknown. Of six brothers, five had acquired hernias. None, except this patient, has been operated on. He has a nephew who is ruptured.

Previous History.—The patient has had the usual infectious diseases of childhood. In 1895 he had cellulitis in his arm, following a wound of the hand, and he was disabled for four weeks. In 1898, he had a mild attack of pneumonia. With these exceptions, he has been unusually well, and until the present time he has been doing farm work every day.

Present Illness.—On May 17, about 8 a. m., while lifting heavy logs, he had a sharp, severe pain in the right groin, but worked an hour longer. The pain increased and became unbearable so that he was obliged to return to his home, a distance of six miles, a half a mile of which he walked. He noticed the swelling over Poupart's ligament, and was seen by two physicians between 4 and 6 p. m., but neither was able to reduce the mass by taxis. He vomited once during the afternoon and spent a sleepless night. May 18 he was no better, and he was brought to this city. His bowels did not move any time after the initial pain until after the operation.

Examination.—When admitted to the hospital he was unable to walk and complained of pain in the groin; his pulse 90, full and strong, and temperature 97 F. He had not vomited during the previous twelve hours and was not nauseated. Near the lower attachment of Poupart's ligament there was a tumor about the size of a walnut, tense, not fluctuating and

without impulse on coughing. It could not be reduced. The external inguinal ring could be felt and the swelling was below it. The skin was not inflamed. The abdomen was slightly distended.

Operation.—The patient was etherized and an incision about five inches long was made parallel and just below Poupart's ligament. The sac was exposed and was found gangrenous and constricted at Gimbernat's ligament. A knife was introduced on a grooved director and the stricture incised and torn sufficiently to release the hernia. The sac contained about two drams of bloody serum and a knuckle of sphacelated intestine. The abdomen was opened through the right rectus, and one and a half inches of ileum removed and an anastomosis made by a Murphy button. A wedge-shaped piece of omentum was excised. The sac was next transfixed by sutures, snipped off, and the stump returned to the abdominal cavity through the femoral ring. Then a radical operation for femoral hernia was done after the method of Bassini; kangaroo tendon was used for the buried sutures. The abdominal wound was next closed with catgut and silkworm gut. The operation consumed one hour and fifteen minutes.

Result.—The patient made a good recovery, sat up on the twenty-second day and left the hospital one month from the day of admission. The button was passed on the tenth day.

Remarks.—Only a very small percentage of hernias in men are of the femoral variety, and the occurrence of rupture in five of six brothers, while only a coincidence, naturally suggests an inherited weakness. In those cases of strangulated hernia in which the active reflex symptoms, nausea and vomiting, are replaced by a quiet, even painless period, we are sometimes deceived and imagine our patient is better. It is a condition which often precedes a fatal termination, and this can not be emphasized too strongly. The surgeon-general's library contains the report of many cases of femoral hernia with complications, but few in which a resection was done in an older patient than in the case here reported.

TRAUMATISM OF THE RIGHT KIDNEY.*

CHARLES B. DYDE, M.D.
GREELEY, COLO.

History.—G. C. F. came under my care April 28, 1905. Ten days previously he had been kicked by a horse, in the right lumbar region, while at work in a livery barn. During these ten days he had been cared for at Kersey, Colo., where the accident occurred. He was prostrated by the force and shock of the injury and for some days suffered intensely. Six or seven days later, as he was feeling much better, he dressed and walked for a few minutes. This was followed by considerable hemorrhage from the bladder, a slight trace of which was observed the day after the injury. As this complication continued, he was removed to Weld County Hospital, where I first saw him. His previous history presented some interesting and noteworthy points. Three years earlier, while in the United States Navy at Norfolk, Va., he had been operated on for appendicitis. Peritonitis and a fecal fistula developed and posterior drainage was made. Later empyema appeared, and this was also drained. Before the integrity of the bowel was restored he underwent a series of six operations. In a year's time he was restored to health, receiving as a legacy an extensive system of adhesions on his right side from diaphragm to pelvis.

Examination.—He was a young man, aged 23, of good development, well nourished, and when not in pain looked well. His condition at this time was marked by severe pain in the right side of the abdomen and very bloody urine; temperature normal and pulse about 80. The right abdomen was very rigid and slightly swollen. The side on a level with and a little anterior to the quadratus lumborum showed the site of the impact, being still discolored.

Hospital History.—During the ten days succeeding his admittance to the Weld County Hospital he showed some improvement, the urine gradually cleared and the pain diminished. Morphia, of which he had been receiving thus far one to two grains daily, was now gradually omitted. The swelling, external to the adhesions, was slightly increased, and the rigidity remained. At this time of apparent improvement, contrary to instructions, he got out of bed and walked as far as the ward lavatory. This indiscretion was followed by a return of both pain and hemorrhage. The pain was very severe, extending from right kidney to testicle, and intermittent in character. He would lie on his right side, knees doubled up, one hand supporting his scrotum. The urine at this time became so bloody that a catheter was frequently required to relieve the bladder. In consultation with Drs. Church and Hughes it was agreed that the renal colic was due to blood clots passing down the right ureter, and that the tumor was probably a sac of extravasated blood. The advisability of operation was considered at this time, but he was strongly opposed to this, his previous experience giving him a strong distaste for the knife. This condition of pain and hemorrhage continued for several weeks, with occasionally a short amelioration of symptoms. As a rule from one to two grains of morphia were required during the twenty-four hours to control the pain, the amount being gradually increased. By this time he had become thin and very anemic; his appetite was poor and bowels constipated. The tumor was very marked, and the rigidity was extending. The pain while sometimes that of renal colic, was usually a general pain through the abdomen, burning in character, and extending well over to the left side. The temperature presented an occasional rise of a degree or two; the pulse was the same as before, but somewhat weaker. During the first ten days of June, the hemorrhage continuing, his weakness increased, and his condition was rapidly becoming critical. At this time a consultation was held and we decided that operative measures presented the only sign of hope. This conclusion was communicated to him and his consent was obtained.

Operation.—We operated on the morning of June 13, just eight weeks after his injury. Kocher's oblique incision was made, by means of which the kidney may be exposed and, if necessary, removed. After going through the layers of muscle and fascia, instead of perirenal fat or kidney presenting in the wound, we found we had opened a large cavity, which seemed full of blood clots. On removing those most superficial, which were partly organized, we encountered a profuse and active arterial hemorrhage. At this moment the anesthetist, Dr. Weaver, stated that the pulse suddenly increased to 140. Compression controlled the hemorrhage until a number of strips of gauze were tightly packed into the cavity; at the same time strychnin and normal saline solution tided the patient over and prevented death on the table. He lived eighteen hours.

Autopsy.—This revealed what we considered an unusual and remarkable condition. The right kidney, entirely free in the cavity, which contained two quarts of blood clots, was broken into three pieces, retaining not the slightest connection with vein, artery or ureter. We considered that his days had been prolonged by the system of adhesions, which walled off and limited the hemorrhage, and that the gradual stretching and tension of these, as the swelling increased, created a great deal of the abdominal pain.

A PECULIAR CASE—PERHAPS NEURASTHENIA.

WILLIAM HIMMELSBACH, M.D.
SAN FRANCISCO.

History.—Woman, aged 35, single. When I first saw the patient, in June, 1903, her condition was that of a pronounced neurasthenic. There was mental depression, irritability alternating with apathy, pain in neck and along the spine, tremor of the hands, occasional twitching of muscles of the face, and dilated pupils. She had been in bed two weeks. Her previous history was that of a well-balanced, active woman, fond of outdoor recreations of all kinds and passion-

* Reported at the Weld County Med. Society, 1905.

ately devoted to music. Her weight previous to her illness was 135 pounds. Like most neurasthenics, she had an obsession; hers was that food is injurious. From the relatives the following facts were elicited: She had gradually abandoned all her pursuits, complained of tiring easily, and had lost flesh gradually until at my visit she weighed but 85 pounds. There were no indications of an acquired neurasthenia through the usual exciting causes, neither was there any family history that pointed to an inherited neuropathic tendency. Examination of pelvic and other organs was negative.

Treatment.—No medical treatment was instituted, but, after gaining her complete confidence through various suggestions, she again took up her former pursuits, and within three weeks developed a voracious appetite, accumulating fat at such a rate that in March, 1904 (a period of nine months), she weighed 240 pounds, an increase of 155 pounds, accompanied by an amount of physical energy that was startling. Any attempt to restrain either her appetite or her movements was met with violent opposition.

Subsequent History.—So she remained till June, 1904, when, just as unaccountably, she stopped eating and the adipose tissue visibly melted away, so that in October, four months later, she dropped from 240 to 135 pounds. Her pulse became feeble and rapid, at times almost imperceptible, requiring considerable stimulation. There was likewise an edema of the feet and legs. Examination of urine was negative. She would take to bed for weeks at a time. In January, 1905, her long-lost appetite reappeared and with an increased voraciousness, mostly confined to cereals and milk. The quantities consumed were simply enormous. I have watched her eat for two hours at a stretch, actually shoveling in the food. To-day she again weighs 245 pounds, an increase of 110 pounds in six months, with every prospect of a still further increase in weight, I trust not in appetite. I am daily looking for a "tack" in the opposite direction. Her mind remains clear.

DICEPHALOUS MONSTER.

W. K. WEST, M.D.
CALUMET, MICH.

I wish to record the following case of dicephalus, and the facts bearing on its birth:

The mother was American, aged 28, and a primipara. Her family history was negative. She had several sisters—all married. There have been no other multiple nor abnormal births in the family.

History.—The patient is a pale, slight woman, 5 feet tall, weight 125 pounds. She has always enjoyed fairly good health until this pregnancy, no history of syphilis. She first felt fetal movements in December, 1904. January 2, following, she was taken with a severe attack of the grippe of the gastroenteric form. Vomiting and diarrhea persisted for several weeks, and she was able to take but little nourishment. This was further complicated in the second week by a thrombosis of the left femoral vein. She suffered much pain in the leg, which became very much enlarged from the groin to the foot. The urine showed a trace of albumin, but no casts. The albumin cleared up in a few days, and the urine remained normal. A blood count was made January 27: Reds 3,160,000; whites, 12,000; hemoglobin 60 per cent. She was confined to bed seven weeks and her strength was only partially regained at the time of her labor.

Labor began suddenly on the evening of March 7, and when I was called a few hours later, it was well advanced, with pains frequent and strong. Her temperature and pulse were normal. The fetus was living and active. An examination showed the presentation to be a breech, with one leg well down in the vagina. A diagnosis of the condition was not made until the monster was partly delivered. One head could be felt through the abdominal wall, but on account of the position of the other and the abdominal distention it could not be made out. Under full chloroform anesthesia, the monster was drawn down until the trunk was nearly delivered. Not being able, after considerable effort, to further extract it, I introduced my hand into the uterus and felt the second head and neck. I then carefully introduced a blunt pointed bistoury, and severed the left head, the lowest down. I had no further difficulty in delivering the monster, and the severed head was delivered by pressure over the fundus. The placenta was expressed by the Credé method; hemorrhage was slight. The difficulty in delivery was enhanced by the very small vagina and rigid perineum, and the latter was torn. I removed the patient to the Calumet and Hecla Hospital the following morning and repaired the laceration. Union of the parts was perfect and her convalescence uneventful.

Autopsy.—An autopsy on the monster was made by Drs. Adamson and Sturgeon, who gave me the following notes: Weight, 8 lbs.; length, 40 cm.; sex, male. Measurements of each head, carefully taken, as follows: Left head, antero-posterior, 10 cm.; bi-temporal, 7.75 cm.; occipito-bregma, 8 cm.; occipito-mento, 10.25 cm.. Right head, antero-posterior, 9.25 cm.; bi-temporal, 7.75 cm.; occipito-bregma, 8 cm.; occipito-mento, 10.25 cm.

There were two heads, two necks, two arms, and two legs;

Fig. 1.—This shows the body well proportioned. The left head was sewed on and conceals the neck.

two distinct spinal columns throughout, and one sternum. The viscera were as follows: The lungs were single; two hearts of equal size were side by side in one pericardium. There were two stomachs, and the intestinal tract was duplicate to the ileum where the two merged and continued as one to the anus. The liver was apparently single, but there were two gall bladders and two bile ducts, though no connection between them could be demonstrated. The pancreas was duplicated, and there was a single spleen in the abdomen, with a small accessory one in the posterior mediastinum. There were two kidneys considerably larger than normal. The bladder was single, with very thick walls. The genital organs were single. (Fig. 1.)

This monster conforms to the species of dicephalus called dicephalus dibrachius dipus. This is the most common form of dicephalus; a number of such cases have been reported, some of them are said to have been adults.

Loyalty to our societies, county, state and national, is among our first duties. Especially is this true of our county societies. In sustaining them we sustain all, for the county society is the unit, just as the town meeting is the unit for our national government.—Williams, in *Jour. Mich. Med. Soc.*

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

SATURDAY, JULY 15, 1905.

THE ANNUAL ADDRESSES.

Dr. McMurtry's address, in this issue, reviews the history of the Association, its work in the past and its prospects for the future. What he says about the section work will be approved and his recommendations accepted without question. The advantages of having a permanent secretary of a section are many and obvious, and the honor of holding such an office should be held as greater in proportion to the self-sacrifice and work that it involves. No office is of more importance than that of section secretary in furthering the real scientific work of the session, and the suggestion that the officers of the several sections meet together for the more efficient co-operation in this work needs no indorsement. Its value is sufficiently evident from past experience. The work of organization which has been going on in the last four years is well brought out in the address. The possibilities of this work, he says, are stupendous, and it is as yet only begun, provided that the professional spirit and loyalty to our higher aims which it has brought in evidence are kept alive. It is only by organization that the profession can command the influence and consideration that is its rightful due and which it has often too much neglected in the past. In this connection may be mentioned the timely remarks contained in the address on the subject of medical legislation. The medical profession has not heretofore always recognized its own strength. With a proper organization using its power as it should and backed by an educated public sentiment which we can produce, almost everything in human power is possible to our united profession. The remarks on medical education are to the point. The good work that has been and is being done is not overlooked. What the reforms in medical education owe to the influence of the Association can never perhaps be fully summed up. It is one thing to remember that if any one man's work is to be specially noted in this reform it is that of the founder, or, as he has been called, the father of the Association, who passed from us last year. Dr. McMurtry's remarks on the work of the Council on Pharmacy and Chemistry call perhaps for no special comment here. They will be generally accepted without question as the only correct professional view of the subject. The work is only in its incipiency, but what is being done is, we trust, such as will insure the cordial appreciation and co-operation of the medical profession. We believe it meets one of the greatest needs of the present day. The readers of the address will find subject for thoughtful consideration in every paragraph.

The address on Medicine by Dr. Stockton is a suggestive discussion of some of the problems of a condition that, with the advances of medicine, is becoming more common and perhaps is yet too little regarded. If old age is an evil or a useless period of human life, one way to counteract the evil would be naturally to postpone it by lengthening out the period of full maturity. This, it may be, will be one of the chief tasks to which medical science will devote itself in the near future. While there is so much talk about the possibilities of lengthening human life, one recent enthusiast going so far as almost to prophesy immortality, we certainly would do well to try to insure that this lengthened existence should be tolerable, even if not fully profitable, to the individual and his associates. We certainly do not want a struldbrug element in our population. Dr. Stockton's suggestion of a pedigree, guided limitation as to marriage, his positive expression of opinion as to the non-transmission of acquired characters and his criticism of the individualistic tendencies in our modern civilization may not be considered as altogether practicable or acceptable by every one, but they are certainly proper food for thought. What he says in regard to the preservation of mature vigor by attention to such conditions of correct nutrition as dental hygiene, by the preservation of useful eyesight, and the prevention of intestinal autointoxication as a cause of arterial disease, are useful, and should be fruitful suggestions. Decay seems to be in the order of nature, but if we can amend that order to any great extent without deranging the necessary balance it is an object well worth our efforts.

Dr. Warren's address is a thoroughly scientific contribution that should go far toward clearing up the confusion which he shows still exists in our ideas in regard to a very important class of morbid growths. A correct arrangement of our knowledge is necessary for a perfect understanding of facts, and a confused and over-redundant nomenclature is the expression of a confusion of ideas and a serious drawback in the acquisition of knowledge. Dr. Warren has, therefore, done a real service to the profession and to the vast number of sufferers from non-malignant tumors of the breast. His address can be profitably read by physicians, as well as surgeons. It is one of the clearest and best statements of the subject that has appeared.

The Oration on State Medicine shows a state of affairs very creditable at least to American medical science of the last few years. While we have always had more or less opportunity for the study of exotic tropical disorders, Dr. Blumer points out that we have a special interest in such diseases owing to the tropical and subtropical climates included within the limits of the United States, apart from its outlying possessions. That

we have not neglected the opportunities afforded us within the last few years is made by him very apparent. The discovery of the prevalence of uncinariasis in the southern section of our country, the conquest of yellow fever in Cuba, the recent researches on dysentery and its cause, the studies that have cleared up some of the questions of malaria in which American science has taken part, and the active research which is now being carried on are certainly highly creditable to American physicians. As he says, the acquisition of tropical possessions by the United States has had a remarkably stimulating effect on American medicine and has led to valuable work, some of it of the very first rank. Dr. Blumer has well brought out the facts, and we trust that what he has said will be a still further stimulus to active and useful effort.

THE OCCURRENCE OF PNEUMOCOCCI IN SALIVA OF HEALTHY PERSONS.

Pneumococci are said to occur in the saliva of about 20 per cent. of normal individuals. Recently this question has been gone over again and the results obtained appear very interesting.[1] Frost and his co-workers, following the usual method hitherto in vogue, determined the presence of pneumococci by means of inoculations of rabbits. In this way they found the organism 18 times—36 per cent.—in the saliva of 50 different individuals. They also found that the frequency with which the germ occurs in saliva varies with the season of the year: 23 per cent. of the salivas examined in the fall giving positive results, 43 per cent. in the winter, and 50 per cent. in the spring. The pneumococcus also appeared more frequently in the saliva of the individuals in this series who worked indoors than in those working outdoors.

It is very desirable that work of this nature be complemented by work of a different character. In the first place, the occurrence of pneumococci on the tonsils should be studied. It may be that the germs are present more frequently here than in the mouth, which is constantly washed out by saliva, whereas the tonsillar crypts contain many recesses in which streptococci, for instance, are able to exist. In a preliminary communication, G. F. Ruediger[2] notes the occurrence of pneumococci in larger numbers than streptococci on the tonsils in cases of scarlet fever, measles and tonsillitis. His cases are as yet too few, however, to permit any general conclusions.

Then again, methods of demonstration should be used other than the inoculation of rabbits. Manifestly, this method will fail in cases where pneumococci, devoid of virulence for rabbits, are present. Fortunately, we have recently come into possession of an elegant and convenient method for this purpose, namely, the blood-agar plate method of Schottmüller. These plates are made by adding from eight to ten drops of defibrinated rabbit or human blood to each tube of melted glucose agar—about 5 c.c—cooled to 45 degrees C. The streptococci grow as small, grayish colonies, surrounded by clear zones due to laking of the red corpuscles, while pneumococci give somewhat larger colonies, surrounded by an opaque area with a greenish tinge. On account of the characteristic appearance of the pneumococcus colonies on blood agar it does seem reasonable to expect that this method will prove of service in studying the presence of pneumococci in the saliva just as well as on the tonsils. The percentage of persons shown to harbor pneumococci by the blood-agar method might differ materially from that obtained by the more cumbersome and expensive method of inoculating saliva into rabbits, because, in the first instance, the variable faculty of rabbit virulence does not cut any figure so far as demonstrating the presence of pneumococci is concerned, and it may be said that it is as yet doubtful whether rabbit virulence on the part of a pneumococcus necessarily means virulence for human beings.

Consequently, it is desirable to know to what extent pneumococci in general are present in the human mouth and throat. When an adequate basis of facts bearing on this question is accumulated, then the more difficult problem of determining the pathogenic potentialities for man of the pneumococci normally present can be attacked in various ways. Undoubtedly, the various investigations placed on foot by the New York Pneumonia Commission will give us information concerning the points mentioned.

1. Frost, Divine and Reineking. Jour. of Infectious Dis., Supplement No. 1, 1905, p. 298.
2. Trans. Chicago Path. Soc., 1905, vi, p. 299.

OPEN AIR TREATMENT OF SURGICAL TUBERCULOSIS

Notwithstanding all the time and attention that have been devoted to the development of the surgery of tuberculous affections, there is probably no other disease with regard to which modern surgeons feel less satisfied. No matter how carefully operations are done, many of them are followed by long-continued suppuration that drains away the vitality of the patient and lessens the hope of ultimate recovery. Often the lesions of surgical tuberculosis occur in children who are least able to withstand this drain on their vitality. Then, too, even under the most favorable conditions serious deformity may occur, and the best results secured by the knife do not compare at all with those obtained by Nature's more conservative method. Unfortunately, under ordinary circumstances, Nature takes so long for the cure of serious tuberculous lesions that confinement, particularly in the hospital, often undermines the general health and not infrequently encourages metastasis of the disease to internal organs.

Physicians and surgeons would be glad to welcome a method of treatment that would obviate these disadvantages, and it seems that it is at hand. Last year the Society for the Improvement of the Condition of the Poor in New York City decided that it could do

nothing better than to improve the conditions of living for the children suffering from various forms of surgical tuberculosis in the orthopedic hospitals. Any one familiar with the orthopedic wards of city hospitals knows how pale and delicate and languid the children look and how much they seem to need the outdoor air which their condition apparently prevents them from having. About fifty of the most needy of these children were sent to a seaside resort not far from New York City to live in tents during last summer. The result was almost magical. Children who had been pale and anemic, with capricious appetites and consequent loss of weight, began to eat heartily almost at once; they took on the healthy color that children should have, and very soon this improvement in general health was followed by improvement in tuberculous lesions.

In some cases, sinuses that had been open for years began to heal, and experience since has shown the healing to be lasting. At first, there was considerable hesitation as to whether children suffering with open tuberculous lesions should be allowed to bathe freely in salt water and to wade in the sand, since it was feared that these might prove irritant, but sand and salt, far from proving injurious, seemed only to arouse dormant pathologic tissues into an activity that soon caused healthy, enduring cicatrization. At the end of the summer, the results had been so good that it seemed too bad to send the children back to the city hospitals, and so quarters were obtained for them, and they stayed all winter near the sea. During the whole winter, the windows on one side of the building were kept wide open and, though the temperature was often below forty degrees at night, the children slept much better than they would have done in closed warm rooms. It was noted that the starting pains so common among such patients ceased within a few days after their arrival in the open-air quarters.

New York's experience is by no means first in this line. For many years, French authorities in orthopedics have considered that the best possible way to treat children suffering from surgical tuberculosis is by prolonged residence somewhere along the seashore, especially on the north coast. If surgical treatment is necessary, then it should be done there and not in the crowded wards of a city hospital. In France they have come to realize all the evil significance of the state for which they invented the word hospitalization, and to consider that when long continued it represents of itself a serious complication of any affection, especially in children. In this country, too, there have been some very successful experiences with the open-air treatment of tuberculosis, one of the most striking of which is the series of cases reported by Dr. Halstead of Johns Hopkins at the annual meeting of the National Association for the Study and Prevention of Tuberculosis. Dr. Halstead has seen even large abscesses in Pott's disease, in hip-joint disease and in sacroiliac disease disappear under open-air treatment without any auxiliary remedial measures.

It is not alone for the more serious forms of surgical tuberculosis, however, that this method of treatment recommends itself. In the enlargements of the cervical glands, which so often represent a difficult problem for the physician and surgeon, no method of treatment is so hopeful nor associated with fewer disadvantages than that of fresh air and abundant diet, which has now come to be recognized as the only proper therapeutics of pulmonary tuberculosis. According to reports from many quarters, even large masses of cervical glands almost invariably disappear in a few months after the patient begins to live in the open air. This is true not only for the hard, enlarged glands, but also for those in which there is already some tendency to softening and for which the indication might seem to be the evacuation of the contained material. It is only to be expected, however, that if large tuberculous abscesses in the hip and other joints will disappear with improvement of the general condition, then surely small abscesses of the cervical glands may be treated with even more confidence in the same way. In a word, there appears to be opening up a new and very promising field for the treatment of a disease that has hitherto been one of the opprobria of modern medicine.

REINFORCEMENTS IN THE PURE FOOD CRUSADE.

In amplification of its support of the pure-food movement, *Collier's*, in its issue of July 8, throws down the gauntlet to the patent medicine manufacturers. Its editor, Mr. Norman Hapgood, contributes a leading article, "Criminal Newspaper Alliances with Fraud and Poison," and formally announces the engagement of a well-known investigator and writer to expose the methods of manufacture and sale of nostrums and the results of their use by the public. "Probably his first topic will be peruna, that hypocritical cocktail in disguise, so popular with many old ladies." And this reminds us that a recent Chicago newspaper presented the portrait of an elderly woman physician of Buffalo, graduate of a reputable medical school, who contributed a glowing endorsement of peruna. On inquiry, she wrote that the testimonial was genuine and that she had a warm regard for this "hypocritical cocktail in disguise."

Every physician who has not read this issue of *Collier's* should do so, and then should keep it on his waiting-room table for some months, along with the subsequent issues. The *Ladies' Home Journal* was among the first of lay publications to join in the crusade against the nostrums, and no doubt its influence had much to do with bringing the W. C. T. U. to see the inconsistency of endorsing alcoholic nostrums while advocating total abstinence. Mr. Hapgood's article, however, is the most powerful lay contribution to the subject that has yet appeared. In part, it occupies the

double page in the middle of *Collier's,* surrounded by a border made up of photographic reproductions of nostrum advertisements cut from leading newspapers. Along with those from some of the "yellow" papers are unpleasant clippings from such moral educators as the New York *Times, Sun,* and *Herald,* the Boston *Transcript* and *Globe,* the Philadelphia *North American,* and the Springfield *Republican.* It is a graphic condemnation of the daily press, and thus far no writer has so keenly exposed the meretricious share of the newspaper in the deadly nostrum traffic. "It sounds high-minded for journalism to bark ferociously against the reign of graft in politics or in high finance, but it can practice a little real reform, if it chooses, by canceling some of the most profitable results of its own limberness of conscience. It hides behind the separation of editorial and business offices, even as members of a corporation hide behind the fictitious entity which they compose. Reform would have greater permanence and value if it sometimes began at home. Hypocrisy is no foundation for spiritual improvement. Newspapers will more successfully reform the world when they have turned against those species of graft which are of peculiar profit to themselves."

Collier's pledges itself to receive no more patent-medicine advertisements, and also to do all it can "to make the public a less easy mark." This trenchant method, supported and maintained, will, with the active co-operation of the medical profession, soon do much toward developing the embryonic journalistic conscience in regard to nostrums. Bryan and Tom Watson are shown guilty, and an almost unbelievable quotation is made from the *Canner and Dried Fruit Packer,* in which packers are urged to withdraw advertising from *Collier's* and publications that advocate the pure-food measure, so that open intimidation is added to the weapons of "fraud and poison."

Lo! these many years we physicians have tried to teach the public that nostrums are harmful. Despite the fact that the use of nostrums tends to increase our professional work, our opposition to the nostrum traffic has always been attributed to jealousy. Now that influential lay journals have espoused our cause, hope revives that the public is to receive a great enlightenment and that the nostrum trade has seen its most profitable day.

GONORRHEAL ARTHRITIS.

In the gradual breaking up of the significance of the word rheumatism which used to prove so satisfactory a designation for so many heterogeneous affections, there is nothing of more interest than the prominent place which is to be assumed among its successors by gonorrheal arthritis. The French have long employed for it the term urethral arthritis, because they consider that there may be affections of the urethra, some of them really secondary complications of gonorrhea, but due to other micro-organisms besides the gonococcus, that may produce metastases to the joints with consequent inflammatory effusion and the typical picture of an arthritis. The French are prone as a nation to be more suspicious of the possibility of venereal complications in apparently innocent affections and are not entirely assured that an arthritis in a particular case may not be of urethral origin unless they are able to determine with certainty that there is, to use their own expressive phrase, no immediate urethral past.

In the reaction that has set in toward ascribing the etiology of many hitherto so-called rheumatic joint affections to the gonococcus, as is usually the case in any new train of thought in medicine, there is a likelihood of exaggeration. There can be no doubt, however, that the gonococcus is responsible for many more joint affections than has been imagined hitherto. It has been stated so often as to be almost accepted as a rule of diagnosis that when the small joints are affected by an inflammatory process, to the exclusion of the larger joints, the affection is very likely to prove to be arthritis deformans rather than any other form of rheumatic ailment. If in conjunction with the small joints, there is an affection of the joints of the cervical vertebræ or of the temporomaxillary joint, then the diagnosis of arthritis deformans is usually supposed to be certain. In some recently reported cases, however, patients suffering from a urethral discharge that had become much less abundant shortly before, have developed symptoms only in the smaller joints and in either the temporomaxillary or in the cervical spinal joints, and the diagnosis has seemed to be without any doubt gonorrheal rather than any other form of arthritis.

On the other hand, it is not an unusual thing for gonorrheal arthritis to confine itself to a single large joint. Until recently, indeed, a monoarticular affection has been considered to be especially suspicious in the matter of urethral origin. Combinations of the large and small joints are not, however, uncommon and gonorrhea may be said to produce all the different combinations of joint affections that were formerly attributed only to acute articular rheumatism. Even so characteristic a picture as that of the redness, swelling and intense painfulness resultant on an arthritis at the base of the great toe, which is usually supposed to be pathognomonic of gout, has been known to develop just after the cessation of a urethral discharge and under circumstances that apparently left no doubt as to the gonorrheal etiology of the metatarsophalangeal arthritis. In a word, any form of arthritis may be due to this micro-organism.

Unfortunately, the prognosis of gonorrheal arthritis is not nearly so favorable as that of acute articular rheumatism and its symptoms do not yield to the ordinary rheumatic remedies. It is much more liable, also, to have serious and even fatal complications because the gonococcus may find a resting place on the heart valves or produce a virulent meningitis. Hence the necessity for exact diagnosis as soon as possible in

order that the more serious character of the affection may be recognized early, that measures may be adopted to prevent the migration of the gonococcus from serous membranes which it already occupies, to others where it may produce serious and probably fatal results.

TO EXAMINE A BOARD AS TO ITS SANITY.

The individual who does not correlate his knowledge with his feelings, who sees snakes when there are no snakes, who hears voices when there are no voices, is taken in charge to be examined as to his sanity. A similar procedure may be necessary to determine whether or not a corporation or a board to which is delegated some public duties is acting in accord with ordinary common sense. This variety of impeachment has a charming naiveté. It was suggested by Homer Folks, secretary of the State Charities Aid Association of New York, speaking before the New York Summer School on Philanthropic Work.[1] He referred to some boards whose official acts may be reviewed by higher powers, and suggested the advisability of such authority in the case of many politically managed bodies which mismanage many hospital, philanthropic and asylum matters. The present tendency is to hold the officers of a corporation individually responsible for such acts of the corporation as are under their respective supervision. But when—as in the recent much-criticised ruling concerning the Santa Fé rates—responsible persons are, by some alleged judicial action, relieved of responsibility, the legitimate procedure is to treat the corporation as a person, declare it insane and suspend its functions and compel reformation.

CHOOSING OUR IMMIGRANTS.

Marked changes in our immigration laws are urged by Robert D. Ward.[2] He recommends that the present laws should be more completely enforced, that the head-tax should be raised, and that illiteracy should be more carefully debarred, but we are particularly interested in his further recommendation that immigrants of poor physique should be debarred. Prospective immigrants of unsound mind are now excluded, so too are those of such unsound morals as to be classed as criminals. The next step should be to debar those of poor physique. This term describes immigrants who possess bodies not only ill-adapted to the work necessary to earn bread, but also poorly able to withstand the onslaught of disease. It includes immigrants who are undersized, poorly developed, and with feeble heart action. Such persons are physically degenerate, and as such are not only likely to become undesirable citizens, but are also very likely to transmit their undesirable qualities to their offspring. The average physique of the present American population is not such that we want it to deteriorate; on the contrary, the average might be raised if we selected our immigrants with reference to good physique instead of allowing our steamship companies their present freedom in unloading undesirable foreigners on our shores.

1. Charities, June 24, 1905, page 853.
2. Ibid., July 8, 1905, page 906.

STREAM INFECTION BY CAMPERS.

At a recent meeting of the California State Board of Health it was proposed to forbid camping in the mountains near the sources of streams. It was claimed that it is a common practice for convalescents from infectious disorders, like typhoid, to seek outdoor life for a time, and that they cause infection of the streams. While this proposed restriction was not immediately favorably accepted by the board, it is fully as reasonable as many other sanitary propositions the enforcement of which is attempted. Investigations should be made to learn to what extent the tendency toward rapid destruction of the micro-organisms because of the agitation of the water in mountain streams is offset by the rapid flow, which, of course, will more quickly carry the infective matter to points lower down on the stream. The matter is worth serious consideration.

SPONTANEOUS GENERATION.

The repeated experiments of an English investigator who is said to have produced something like living forms by the action of radium on sterilized bouillon do not appear to us to deserve the importance attributed to them in the public press and elsewhere. It is unfortunate in some respects for the claim that spontaneous generation is possible that all experiments in this line deserving of any consideration whatever are made with already organized matter. The present case is no exception. It is not claimed, moreover, that life has been actually produced, but only that something resembling it or suggesting it resulted in the course of experiments. Radium is a powerful agent in many ways, and it is not remarkable that it can cause changes in even dead organized matter that may at first sight or in some ways simulate life.

THE PORTLAND SESSION.

The fifty-sixth annual session of the American Medical Association has been held during the past week at Portland, Oregon. The distance of the meeting place from the office of publication and the fact that THE JOURNAL goes to press on Wednesday prevent the publication of many details of the session in this issue. We learn, however, by telegraph some particulars from the first two days of the session. The weather was perfect, the sky was clear, and the temperature very comfortable. The attendance proved to be a large one, considering the distance of the meeting place from the centers of membership. On Monday and Tuesday 1,416 members had registered, and, doubtless, 200 or 300 more might be expected to register during the remainder of the session. At the moment of writing, therefore, it is safe for us to predict a registration of 1,600 or 1,700. It will be recalled that the total attendance for each of the last five years has been as follows: 2,019 at Atlantic City in 1900; 1,806 at St. Paul in 1901; 1,425 at Saratoga in 1902; 1,993 at New Orleans in 1903, and 2,890 at Atlantic City in 1904. The real opening of the session was on Monday, July 10, for, as the House of Delegates is the business body of the Association, its first meeting contained the first proceedings of the Associa-

tion. The House of Delegates met at 10 a. m. Monday, July 10, and prepared for business. Credentials were attended to, the roll was prepared, various committees were appointed, and then the regular reports were received. First came the report of the Secretary, then the report of the Board of Trustees, and following this were the reports of the committees on medical legislation, Rush monument, Walter Reed memorial fund, and medical education. The first general meeting of the Association was held Tuesday, July 11, at the armory of the Oregon National Guard. On Tuesday afternoon the various sections held their first meetings and commenced the discussion of papers. The session is a success and the attendance is excellent. A full report will be given next week.

Medical News

CALIFORNIA.

Medical College Commencement.—The annual commencement exercises of the College of Physicians and Surgeons of Los Angeles were held in that city June 29. There were six graduates. The doctorate address was delivered by the Rev. George A. Gates, D.D., president of Pomona College.

Medical Society Refused Articles of Incorporation.—Several eclectic physicians of California who applied for articles of incorporation for a society entitled "The Medical Society of the State of California" have been refused because another society of that name is already in existence, incorporated in 1870. The state's attorney is reported as saying that the first incorporations of all three state societies were not legal. Accordingly the state homeopathic and eclectic societies have applied for new articles to correct the error, but it is not stated that the regular society has done so.

CONNECTICUT.

Hospital News.—The new St. Vincent's Hospital at Bridgeport was formally opened June 28.——The Danbury Hospital has been voted an appropriation of $5,000 by the senate.——A bill appropriating $420.000 for the Norwich Hospital for the Insane has been signed by Governor Roberts.——The remodeled Meriden Hospital was reopened June 28.

DISTRICT OF COLUMBIA.

Washington.

Tablet to De Schweinitz.—A handsome bronze tablet has been erected in the main hall of the George Washington University to the memory of Dr. E. A. de Schweinitz. The tablet is 2x3 feet in size, with the following inscription:

Emil A. de Schweinitz, A.B., Ph.D., M.D. Born Jan. 18, 1864. Died Feb. 15, 1904. Professor of Chemistry and Toxicology, 1892-1904. Dean of the Department of Medicine, 1897-1904. In recognition of his services to Medicine and to the Cause of Medical Education, this tablet is affectionately erected by the Medical and Dental Classes of 1904, 1905, 1906, 1907, and by his Colleagues of the Medical and Dental Faculties.

ILLINOIS.

Chicago.

Medical Colleges.—The commencement exercises of Jenner Medical College were held in Handel Hall, June 26. There were 15 graduates. The doctorate address was delivered by Dr. Stuart Johnstone.

Hospital Cornerstone Laid.—The cornerstone of the new Michael Reese Hospital, at Groveland Avenue and Twenty-ninth Street, was laid July 4. The new structure will cost over $500,000, and it is announced that it will be made one of the best appointed hospitals in the world.

Physicians in Wreck.—Drs. Frank Billings, Arthur Dean Bevan, W. A. Pusey, L. L. McArthur, of Chicago; Dr. Meecher of Portage, Wis., with some friends, had a narrow escape from death while traveling in a private car en route to Portland. The accident occurred near Willston, N. D., early on the morning of July 6. The train was the Great Northern flyer. Seven cars were burned and about thirty persons were injured, one seriously.

Health Statistics.—The total number of deaths in Chicago for the week ending July 8 was 420; of these 239 were males and 181 females. Tuberculosis caused 58 deaths, the largest number from any one cause. Causes of death were reported as follows: Bright's disease, 45; acute intestinal diseases, 38; heart diseases, 39; pneumonia and "cancer," 26 each; nervous diseases, 22; violence other than suicide, 33; apoplexy, 5; bronchitis, 4; convulsions, 7; diphtheria, 2; measles, 3; scarlet fever, 1; smallpox, 4; suicide, 7; typhoid fever, 6; unclassified, 85.

MARYLAND.

Baltimore.

Personal.—Dr. Harry F. Reid has gone abroad.——Dr. S. J. Ulman has returned from Europe.——Dr. Ridgley B. Warfield has gone to Europe for two months.——Dr. Christian Deetjen will spend some months in Europe studying Finsen light, radium and *x*-rays.——Dr. H. Warren Buckler is at the White Sulphur (Va.) Springs as resident physician for the summer.——Dr. Samuel Theobold has taken a cottage at Ocean City, Md., for the summer.——Dr. James Homer Wright (Univ. of Md. 1892), who has made valuable researches in the bacteriology of actinomycosis and aleppo boil in the last year, received the B.S. degree at the recent commencement of Harvard University.

MASSACHUSETTS.

Berkshire District Medical Society.—At the monthly meeting of this society, held at Pittsfield, June 29, Dr. I. S. F. Dodd of that city was elected secretary in place of the late Dr. L. C. Swift, who recently died from meningitis.

Hospital Sued.—Mrs. C. R. Putnam has attached the property of the Massachusetts Homeopathic Hospital, Boston, in a suit for $50,000. She alleges that because of lack of proper treatment while in the hospital she contracted blood poisoning and that her child died.

MISSOURI.

St. Louis.

Personal.—Dr. A. C. Bernays sailed for Europe July 6.

Will Add to Asylum.—A new wing, costing $300,000, will be built on the City Insane Asylum in the fall.

Proposed College Merger.—The Barnes University has offered its buildings and medical school to the State University as its medical department. The offer means donation of buildings in St. Louis to the state.

NEW YORK.

To Avoid Tetanus.—The State Board of Health issued a bulletin on July 1, calling attention to the fact that tetanus frequently followed Fourth of July injuries and urging all physicians who treated persons injured in this way to administer preventive doses of tetanus antitoxin at the time the wounds are dressed. The department believed that many cases of tetanus were prevented last year by this means. Generous supplies of the antitoxin produced in the department laboratory were sent free to local health officers in all the large cities and villages and in many towns.

Resignation of Dr. Pryor.—Announcement is made of the resignation of Dr. John H. Pryor from the superintendency of the New York State Hospital for Incipient Tuberculosis. Dr. John H. Pryor, by his indefatigable efforts in season and out of season to found a hospital by state aid in the Adirondacks for incipent tuberculosis cases, had the confidence of the entire medical body of the Empire state in his worthy efforts. In the short period of his duties as superintendent of the hospital he accomplished much good. Dr. Pryor resigned because his hands were so tied by red tape that it was impossible for him to administer the affairs of the institution with justice to the patients, to the public and to himself. In his words, the reason for his resignation are: "Too many shackles, too much red tape, too many bosses and too much humbug in the administration of civil service affairs in New York state."

New York City.

More Water for Queens.—Work has been begun on important extensions to the city water supply systems for Long Island City and Flushing. The pumping station at Lake Kissena will be connected with the Flushing standpipe.

Heat Prostrations.—The extreme heat of the first few days of this month resulted in a large number of heat prostrations and there were many calls for hospital aid. The new method of ice baths for heat prostrations was put to frequent use.

Floating Hospital.—The *Helen C. Juilliard*, the hospital ship of St. John's Guild, has begun to make daily cruises. Admission tickets are distributed at 1,500 places in the city, including hospitals, dispensaries, diet kitchens and missions.

The Subway Air.—Since the warm weather has made the air of the subway almost intolerable, many suggestions for ventilation have been offered, and two fans have been installed as an experiment. Thus far they have given favorable results.

Home for Nurses.—A plot of ground has been purchased adjoining the Flushing Hospital, Brooklyn, for the sum of $2,500, on which a home for nurses will be erected. Two donors, whose names are withheld, have contributed $1,000 each toward the building expenses.

Independence Day Accidents.—There were only three deaths in New York City as the direct result of Fourth of July celebrations, but more than 200 persons were injured. Of these 176 were sent to hospitals, and about a dozen of them are expected to die as a result of their injuries.

Unlicensed Practitioner Arrested.—Eugene Christian was arrested by the New York County Medical Society on a charge of practicing medicine without proper credentials. He has been advertising in periodicals throughout the country and claimed to cure many ills by putting his patients on a "proteid nut food" which he sold them.

Contagious Diseases.—There were reported to the sanitary bureau for the week ending July 1, 632 cases of measles, with 13 deaths; 418 cases of tuberculosis, with 145 deaths; 235 cases of diphtheria and croup, with 20 deaths; 83 cases of scarlet fever, with 4 deaths; 47 cases of typhoid fever, with 9 deaths; 35 cases of cerebrospinal meningitis, with 22 deaths; 109 cases of varicella and 1 case of smallpox.

City in Good Health.—The death rate in New York City for the first six months of this year was considerably lower than for the corresponding period of 1904. It was nearly as low as the death rate in 1903. For the past six months the death rate was 19.75; for 1904, 22.68, and for 1903, 19.14. For the week ending July 1 the death rate was 18.55, as compared with 21.63 for the same week of 1904.

Personal.—Dr. and Mrs. Charles H. May sailed for Europe on the *Kaiser Wilhelm der Grosse* on July 3.——Dr. and Mrs. F. W. Chamberlain sailed on the *Noordam* for Rotterdam on July 5.——Dr. J. G. Baldwin sailed for Bremen on the *Bremen*, July 6.——Dr. John S. Billings sailed for Queenstown on the *Oceanic* on July 5.——Dr. and Mrs. A. Palmer Dudley sailed for Queenstown on the *Oceanic* on July 5.——Dr. H. P. Loomis sailed for Queenstown on the *Oceanic* on July 5.——Dr. George W. Jacoby sailed on the *Bluecher* for Hamburg on July 6.——Dr. and Mrs. William S. Bull sailed for the Mediterranean on the *Princess Irene* on July 8.

Hospital Boat Near Completion.—The health department will soon possess the most novel craft afloat in the *Claudine*, which will be ready for launching within a few weeks. It will have eight large wards and is also equipped as a fire-fighter and a water boat with tank capacity enough to supply the city institutions on all the islands of the Hudson and East rivers. The cost of the boat will be $70,000. All the rooms will be enclosed in steel, so that they can be shut up for disinfection, and the plan is so contrived that there are no ceiling or floor angles in which dust can accumulate. It is expected that the *Claudine* will be able to maintain a speed of 15 knots and she will be held in readiness to go wherever she may be sent to pick up patients.

The National Antiadulteration League.—The articles of incorporation for this league have been signed and officers elected. The league has been at work for many months making analyses of various foodstuffs sold in the city. By experiments they have established that illness would follow the consumption of some of these articles. They intend sending a petition to the health department, asking that the sale of such articles be forbidden, and they are planning to bring proceedings against the corporations which manufacture and adulterate the articles. The daily papers have intimated that this league had accused the health commissioner of neglect of duty in this direction, but these statements have been contradicted at headquarters and the health board is ready to give its support to the work that the league has set out to accomplish.

"Sanitarium" Raided.—The removal of a large wicker basket in an undertaker's wagon from the house of "Dr." L. Gray Blum, who is a fugitive in South America, led to investigations. The house was, according to the sign, occupied by "Drs." Norman Schenck and Orrin B. Kinney, though it appears that the former is only a fictitious person. Dr. Kinney had the death certificate of the woman whose body was removed in the wagon signed by Dr. George A. Morgan. Both men are graduates of the Vermont University. The coroner stated that the woman had died of peritonitis following a criminal operation. When the detectives arrived to make arrests the house was deserted, patients and attendants having escaped by way of the roof. That the house was a hospital was shown by the drugs, surgical appliances, etc. The coroner held Morgan without bail.

OHIO.

Physician Injured.—On June 26 Dr. J. B. Owsley of Jacksonboro, was slightly injured by being thrown from his buggy.

Physician Arrested for Arson.—Dr. Elmer Bechtol of Lodi has been arrested, charged with setting fire, thirteen years before, to a drug store which he conducted in North Baltimore.

PENNSYLVANIA.

Donation to York Hospital.—It is announced that Mr. and Mrs. A. B. Farquhar have donated $1,000 to the York Hospital. It will be applied to the remodeling of the nurses' home.

Fire in Hospital.—A fire broke out in the storeroom of the Presbyterian Hospital, Allegheny, July 3. Nearly all the patients were removed to places of safety. The blaze, however, was extinguished in a short time and the patients were returned to the building.

Philadelphia.

Bequests.—From the balance of the annuity fund of the estate of Anna H. Wilstach, the hospital of the Protestant Episcopal church receives $6,624.42; the Protestant Episcopal City Mission, for the use of the Home for Consumptives, $6,624.43; the Pennsylvania Hospital, $6,000, and the Howard Hospital, $624.43.

Reading Relief Report.—The statement of the Philadelphia & Reading Relief Association for the month of May shows an expenditure of $19,562.20, of which $9,300 was paid for deaths and $10,262.20 for disability. The number of deaths was 18, 4 of which were accidental and 14 due to natural causes; 1,077 new cases were reported.

Health Report.—During the week ending July 8 there was reported to the Health Bureau a total of 460 deaths, being an increase of 25 over those of last week, and an increase of 22 over the corresponding week of last year. The increase was largely due to the mortality among infants. This alone numbered 110. The principal causes of death were: Typhoid fever, 6; diphtheria, 7; pulmonary tuberculosis, 57; cancer, 22; apoplexy, 21; heart disease, 33; acute respiratory disease, 19; enteritis (under 2 years), 94; enteritis (2 years and over), 7; Bright's disease, 35; accidental injuries, 10; marasmus, 10. There were 167 cases of contagious disease reported, with 15 deaths, as compared with 158 cases and 25 deaths for the previous week.

Personal.—Dr. and Mrs. S. Lewis Zeigler sailed for Europe June 29.——Dr. J. Louis Borsch sailed on the *Kaiser Wilhelm der Grosse* for Europe, July 4.——Dr. and Mrs. J. Oram Ring sailed on the *Bremen* from New York for a three months trip in Europe, July 6.——Dr. Charles P. Grayson sailed for Naples July 5, and will remain abroad until September.——Dr. Mihran K. Kassabian sailed for Europe July 8. Dr. Kassabian has been appointed delegate to represent the American Medical Association, the American Electrotherapeutic Association and the American Roentgen Ray Society at the International Congress of Radiology and Ionization, which will convene in Liege, Belgium, September 12. He also is a representative of the American Electrotherapeutic Association to the International Congress of Physiotherapy, which will meet at the same place, August 12. He will return home in September.

Hospital Reports for June.—The Presbyterian Hospital admitted 200 patients to the wards and treated 1,955 in the various dispensaries. The Charity Hospital treated 628 cases and compounded 756 prescriptions. The Medico-Chirurgical treated 244 patients in the wards and 5,973 patients in the different dispensaries. The Germantown Hospital admitted 92 patients during the month and treated 1,350 in the dispensary. The Mount Sinai Hospital admitted 66 to the wards, treated 1,246 new patients in the dispensary and 2,634 old patients; 239 accidents were treated, making a total of 4,118. The Woman's Hospital admitted 111 patients to the house and treated 1,955 patients in the clinics. St. Agnes' Hospital admitted 191 patients to the house, treated 567 new cases in the dispensary and 1,986 old cases. St. Mary's Hospital admitted 142 to the wards, treated 480 new and 1,567 old patients in the dispensary.

Aftermath of the Fourth.—The accidents and deaths resulting from the celebration of the Fourth of July in this city were less than for a number of years. Two deaths, however,

were reported, due directly to the use of explosives. Two probably fatal injuries, several serious accidents and a multitude of minor casualties marked the celebration of the day. One 9-year-old child was killed by the accidental discharge of a revolver and the other fatal accident resulted from the patient being killed in a runaway caused by fireworks. One woman was struck in the eye by a stray bullet; one man was shot in the abdomen while exhibiting his revolver to a friend; one boy received a charge of shot in the face. The approximate number of accidents and the causes gathered from the various hospitals are as follows: By fireworks, 108; by cannon, 7; by firearms, 36; by gunpowder, 289; by toy pistols, 90; by runaways caused by explosives, 4; total, 534.

Railroad Physicians Special Inspectors.—Dr. Samuel G. Dixon, commissioner of health of the state, has appointed all the medical examiners of the Pennsylvania Railroad Voluntary Relief Department, and the Philadelphia & Reading Relief Association, to be special medical inspectors in the department of health for these two railroads. These appointments carry with them no salaries from the state, but the co-operation between the health department and the railroads has been shown to be very advantageous in the prompt and effectual handling of cases of contagious diseases that occur on trains, in the car works or in railroad stations. The following is a list of the examiners of the two roads appointed by Dr. Dixon as inspectors: Pennsylvania Railroad—Dr. Samuel W. Latta, Philadelphia, chief; Drs. D. W. Nead, C. J. Roberts, E. C. Town, J. L. Bower, Reading; J. L. Wright, Columbia; W. T. Bishop, York; S. M. Crawford, Harrisburg; A. T. Poffenberger, Sunbury; H. E. Westhaeffer, Williamsport; J. B. Lincoln, Renovo; S. A. Bonaffon, Erie; R. B. Moore, Huntingdon; H. W. Pownall, Tyrone; W. B. Diffenderfer, Altoona; C. F. Hough, Cresson; C. W. Banks, Derry; D. M. Easter, Youngwood; W. K. T. Sahm, Pittsburg; J. B. Hileman, Pitcairn; J. C. Lemmer, Oil City. Reading Railroad—Dr. Caspar Morris, chief; district No. 1, Philadelphia, Drs. F. E. Brister, Francis F. Ferris, Norris S. McDowell; district No. 2, Reading, Drs. Charles A. F. Detweiler, Albert F. Bronson; district No. 3, Pottsville, Dr. Thomas F. Heebner; district No. 4, Tamaqua, Dr. William H. Brothers.

GENERAL.

Yellow Fever and Malaria in Panama.—Consul-General Lee reports that one of the worst phases of the recent outbreak of yellow fever is that two of those attacked are Jamaican negroes, who are considered racially immune from fever. The disease undoubtedly exists in a particularly virulent form. A short time ago one ward at Ancon Hospital was sufficient to contain suspects; now three wards are necessary to accommodate them. Lee states that besides yellow fever, malaria is exceedingly prevalent; as many as thirty cases a day have been admitted to the hospital. He says that all possible precautions are being taken and that the city of Panama is undergoing another complete fumigation. Had not the sanitary authorities already accomplished such valuable and useful work, the yellow fever situation now, at the beginning of the wet season, would be indeed appalling.

CANADA.

Addition to Hospital.—The Western Hospital, Montreal, is erecting two new wings for the accommodation of 100 and 150 patients, respectively. When completed the hospital will have accommodation for 500 patients.

Personal.—Dr. A. B. MacCallum, professor of physiology in the University of Toronto, has gone to attend the meeting of the British Association in South Africa.——Dr. Walter Langrill, formerly medical health officer of Hamilton, Ont., has been appointed medical superintendent of the Hamilton General Hospital, while Dr. Roberts of Hamilton has been appointed to the position of medical health officer.

Royal Jubilee Hospital, Victoria, B. C.—The annual meeting of this institution was held June 29, when the resident medical officer presented the annual medical report. This showed that during the last hospital year 1,058 patients had been treated in the institution, ten more than for the previous year. The total collective days' stay was 21,307. The cost of maintenance during the year was $36,294.10, a cost per patient per day of $1.70.

Tuberculosis Sanitoria.—A sanatorium for consumptives is to be established at Holland, Man.——British Columbia has established a sanatorium for consumptives at Savona, B. C. For the present it is but a canvas settlement.——The government is to be asked for a substantial grant toward the erection of sanitaria for consumptives in different parts of the dominion.——Mr. McCormack, a prominent manufacturer of London, Ont., has given the National Sanitarium Association $3,500 for the erection of another cottage at Muskoka.

Manitoba Medical College.—The calendar of the Manitoba Medical College now going to press contains three important announcements. First, there is a description of the new building being erected contiguous to the Winnipeg General Hospital, toward the completion of which this season every effort will be made. The five-year course has been adopted, and will come into operation at the next session. The faculty has been reorganized and the following nine practitioners of Winnipeg added thereto: Drs. A. J. Douglas, O. Bjornson, G. Heibert, C. C. Field, W. Rogers, H. Mackay, S. J. Elkin, A. J. Burridge and W. Webster.

Ontario Medical Council.—At the annual meeting of the Ontario Medical Council, held in Toronto last week, Dr. Albert A. Macdonald, Toronto, was elected president; Dr. W. H. Moorhouse, London, Ont., vice-president; Hon. Dr. R. A. Pyne, Toronto, registrar; Dr. H. Wilberforce, Aikens, treasurer. The council decided to ask the Ontario Legislature for an amendment to the Ontario Medical Act, which will prevent Eddyites and other so-called faith healers evading the law on technicalities. The council will also ask aid for consumption sanitaria and the eestablishment of a department of public health for the province. The official prosecutor reported that during the past year 52 cases had been dealt with; 24 convictions had been obtained, 9 had left the country, 11 had been dismissed and 6 had not been proceeded with. An amendment was made in the by-law relating to examiners, as follows: No teacher shall be eligible for appointment as examiner in the subject he teaches, but this restriction shall not apply to teachers of anatomy, physiology and chemistry.

The Toronto General Hospital and Its Opponents.—Representatives of the staffs of the hospitals in Toronto, except the General, called a meeting of the profession of Toronto July 6, to discuss the proposed grant of $200,000 by the City Council to the General Hospital. Opposition melted away when once the terms of the proposed grant were explained by Medical Health Officer Charles Sheard; and the meeting, called in opposition, almost unanimously approved of the scheme of a new general hospital for Toronto. It is proposed that all public ward patients shall be for the purposes of clinical instruction by the staff of the medical faculty of the university exclusively, and that all other accommodation in the hospital shall be equally available to all other practitioners of good standing in the province, and that what is to constitute a public ward patient is one who is unable to pay his medical attendant. Another condition of the grant will be that the board of trustees of the new hospital shall be constituted equally by the Ontario Government and the municipality of Toronto. It has not yet been decided whether a branch hospital will be retained in the east end of the city on the present site of the General Hospital. The new hospital will be situated within a very short distance of the medical buildings of the university.

Organization of the Profession in Canada.—A. Laurandeau has an open letter to the physicians in his district, Joliette, Canada, in the last *Bulletin Méd. de Québec.* The local medical society has established a minimal rate of $2 for fees for maternity cases, and he is urging its general adoption throughout the district. Out of the 56 physicians in the dis-

Not Cured by Eddyism.—Dr. Guest, in a recent discussion bestated that they will not accept it. He comments that a physician must rate his work, his knowledge and his intelligence very low who is willing to conduct an obstetric case, with the delivery, application of forceps, etc., and expenses of transportation, for the paltry sum of $1.50. He remarks that these excessively low charges actually bring discredit on the profession in the eyes of the patients. A certain lodge practice was offered to him recently, with fees of 25 cents for visits in towns and of $1 in the country. He declined, saying that he could not accept less than the minimal established tariff, and the lodge at once agreed to his terms. He thinks that if others would take a similar stand the results would be far-reaching throughout the country. The practice of making an annual contract with a family is still in vogue in some places in his district. He knows of instances where families of twelve or fifteen members are treated, under forfeit, for $3 or $4 a year, including even the care of obstetric cases. In conclusion, Laurandeau expresses his amazement that in this age of grouping of interests everywhere, physicians are so slow to recognize the benefits that come from organizing. "Open any daily paper," he remarks, "and what unanimity of effort to obtain better pay and less hours of work! We

physicians alone seem to be the only ones who voluntarily condemn ourselves to prolong indefinitely our precarious existence. Our processes are perfected, our equipment more expensive, our intelligence better cultivated, we cure our patients better and quicker than ever before. Is it not reasonble that we should fare better than we used to?" "Friendship, co-operation, devoted fraternity will pay in actual dollars and cents, if nothing else."

FOREIGN.

Russian Hospital Ships.—The Japanese have released two of the three Russian hospital ships recently captured. The third is kept on account of some red tape in regard to some rescued English sailors found on board when the ship was taken.

Medical Aspect of Tercentennial of Don Quixote.—By royal decree the addresses at the medical festival meeting at Madrid in honor of the publication of Don Quixote have been collected and published in book form. The medical aspect of Cervantes' writings and the medical history of his day are thus to be perpetuated. The meeting was one of the features of the general celebration of the tercentennial, mentioned in these columns on page 1789 of the last volume.

French Expert Testimony on the Mental Condition of the Princess Louise of Saxe-Coburg.—Entirely opposite to the testimony of the German and Austrian psychiatrists, Krafft-Ebing, Jolly, Obersteiner and others, the French experts testify that they regard the princess as mentally sound and responsible for her acts. The French psychiatrists were Magnan and Dubuisson. Garnier was on the list, but died a few weeks ago. The patient was under their observation for six months.

Campaign Against Cholera in St. Petersburg.—The local board of health has had about $21,000 placed at its disposal for the impending campaign against cholera. Medical students are to be engaged to keep a constant oversight over houses and buildings known to be in an insanitary condition. Each sanitary inspector is to be supplied with $1,000 for the purpose of equipping and maintaining an eating and tea room in his district, and suitable local quarters for isolation are to be provided.

Free Milk Tickets in Berlin.—The German Association for the Reduction of Infant Mortality has instituted a system of tin checks, each stamped 5 pfennige. Physicians are supplied with these checks to any amount, and they are distributed to indigent mothers, who can obtain for three of the tickets a quart of pure milk at any of the substations of the association. The physicians write the name, residence and date on slips furnished with the tickets. The milk is sold generally for 15 pfennige, less than 4 cents a quart.

Declaration of Infectious Diseases in France.—The number of cases declared in 1902 was 39,234, and in 1904, 67,879, but this is far below the actual number of cases of communicable diseases. The Paris *Académie de Médecine* recently called attention to this discrepancy, and urged the stricter enforcement of the laws in this respect. It also passed a resolution calling for more effectual and compulsory disinfection. The uselessness of attempting sterilization was pointed out by some speakers. Simple, effectual disinfection would not be dreaded so much by the families.

Plague in Japan.—According to the report of Assistant Surgeon Moore in *Public Health Reports*, the plague situation in Tokyo shows no tendency toward amelioration, but that on the contrary new cases are occurring and the number of foci of infection is increasing. From April 18 to May 30, 1905, the total number of cases of the disease reported in Tokyo was 8, of which 6 terminated fatally. In addition there have been one or two doubtful cases. On May 29 a plague death occurred in Chika Ken, the prefecture adjoining Tokyo on the east. The victim had resided in the Fukagawa district of Tokyo, where, no doubt, he contracted the infection.

Official Thyroid Treatment.—Wagner von Jauregg is a member of the Austrian Board of Public Health and has been making a systematic inquiry into the cases of cretinism in Austria and supplying thyroid treatment for the apparently curable cases. The thyroid tablets are made in the government laboratories at Vienna, and are given to the school teachers in the various localities. They in turn dole out to the parents every week the number of tablets ordered. Recent inquiry in the Trieste district revealed 100 cretin children, 23 of whom were considered curable and treatment was instituted. The results are proving very satisfactory throughout the country.

Women Physicians in Mohammedan Countries.—The government in the French African colonies is advertising for women who are physicians to open dispensaries for the poor Mohammedan women in the towns. The last *Archives Gén. de Méd.* states that the authorities will supply and equip the dispensaries and supply medicines for distribution, and also pay an indemnity of $500 to $600. Dispensaries conducted by men are shunned by the women, as their religion and customs forbid their appearing before any man but their husbands, and yet the women need medical care and advice more than the men. The authorities have found that even when a woman and her husband are both anxious to have her take advantage of the dispensary they are deterred by fear of the general reprobation of such a step.

The Rothschild Endowment at Vienna.—The will of the late Baron Nathaniel v. Rothschild left $5,000,000 to the city of Vienna to be applied to public hospital service. The will stipulated, however, that the income from the endowment should be applied exclusively to the founding and maintaining of institutions in or near Vienna for curable nervous affections—as the clause states, "for the care and cure of the 'borderland' nervous affections, such as are generally called 'nervenkrankheiten.'" The endowment of beds for such patients in the present hospitals is also provided for. The will further states that the institution or institutions to be founded should be modeled closely on the two sanatoria for similar purposes at Rappersmühle, near Göttingen, and at Zehlendorf, near Berlin. Paralytics, tabetics, cases of incurable epilepsy, the insane, etc., are to be excluded.

Sanitary Conditions in Venezuela.—According to *Public Health Reports*, the health condition of Maracaibo is not very satisfactory. There have been three years of extreme drought. For a year there has been no rain, and as there are no rivers and no wells near the city, the condition of the poorer classes is very trying, as they are obliged to use the water of the lake, which is the germ bed of all stomach and intestinal diseases of the people. Formerly there were winds at night, but they have died away. The heat and calms prevailing are the weather conditions for earthquakes. Unfortunately, yellow fever seems to demand more victims. During the last few months the number of cases among people of the higher classes, who are presumed to have healthy homes and comfort, became alarming. A European is more apt to resist the fever and to recover. The people from the Cordilleras are apt to succumb and to die in the course of a few days.

Fine for a Paris Surgeon.—A damage suit which had been brought against a French surgeon, Dr. J. A. Fort, was mentioned in THE JOURNAL, Oct. 15, 1904. The complaint stated that he had left a broken instrument in the patient during an operation. The circumstances of the case were that the olive tip of a fine, flexible sound, with which he was striving to dilate a stricture of the esophagus, was broken off by a sudden spasmodic closure of the stricture. As the gastrointestinal tract tolerates much larger foreign bodies than this, Fort regarded the loss of the smooth bulging tip of the sound as of little importance and said nothing about it. The patient died not long afterward, and nothing was found to indicate that the broken part of the sound had caused the slightest irritation. The Paris court, however, when the case came up in June, imposed a fine of $10 for the surgeon's carelessness in omitting to inform the patient or his physician of the accident.

Organization of the Profession in Germany.—The annual meeting of the *Leipziger Verband*, the association formed in the profession to protect the material interests of the physicians of Germany, was held at Strasburg in June. The proceedings of this and of the thirty-third annual *Aerztetag* immediately following were extremely quiet and harmonious, in marked contrast to the stirring meetings of the last two years, when the colleagues in the encroaching grip of the sickness insurance companies were battling for remuneration on a more equitable basis. The particulars of the organization of the *Leipziger Verband* less than five years ago and of its great and immediate success have been duly chronicled in THE JOURNAL. At present, as the *Münch. med. Wochft.* expresses it, the physicians of Germany stand at the triumphant and honorable conclusion of serious economic conflicts. As the result of these struggles their material standing is essentially better than it was before. Their economic organization is firm and tried. The outlook into the future, if not entirely peaceful, is yet more hopeful and kindlier than it has ever been. Even the usual official address of welcome by the governor of the state was marked by kindly, unstinted appreciation of the truth and justice of the demands of the profession, and congratulations at their success. The report of the secretary of the *Leipziger Verband* presented an imposing picture of the ramifications of its work throughout the country and the number of physicians assisted to maintain their modest rights by the powerful aid of the voluntary backing of their colleagues.

LONDON LETTER.

Suffocated by a Cat.

An inquest was held in London recently on a child aged one month, who was put to bed at mid-day by a relative. Half an hour later, when she went into the room, she found the cat lying curled up on the child's face. On removing the cat she found that the child was dead. Medical evidence showed that death was due to suffocation and the opinion was expressed that it was due to gradual deprivation of air. It was not supposed that the cat lay on the child's face, but that it was too close to the child and that its fur prevented the child from breathing. The weight of the cat on the infant's chest probably materially assisted in bringing about a fatal termination. The case shows the danger of allowing children to make bedfellows of animals.

Infants Smothered in Bed.

In 1901 1,538 deaths of infants in England and Wales were due to being smothered in bed, and no fewer than 500 of these occurred in London. In 1903 the figure rose to 1,629, of which 600 occurred in London. Dr. Waldo, the coroner for the city of London, said that in his experience few of the cases were due to drunkenness of the parents, but rather to the ignorance or carelessness of the mothers, who did not realize the need of cots. Mr. Butcher, a Lancashire coroner, says that it is probably owing to affection that parents wish to have children in bed with them. He has laid it down as a rule that whenever children die from this cause he will order a post-mortem examination. By this means he hopes to stop the practice.

Infant Murders by Children.

From time to time the country is shocked by the murder of infants by very young children. A recent case which occurred at the Liverpool Working Hospital, shows the danger of leaving infants alone with young children. An infant aged nine months was left asleep in a convalescent ward which contained a number of older children. The nurse was absent for a few minutes and on returning found the infant choking with a piece of bread in her mouth and a scratched and swollen face. A lad aged 5 years had put the bread in her mouth and covered her face with his jacket "for fun." He had also kicked her. Meningitis and pneumonia supervened and death occurred after some days. Nothing abnormal was noticed about the boy who committed the crime and he left the coroner's court in charge of his parents. According to English law, a child under the age of 7 years is considered incapable of committing a crime. If between the age of 7 and 14 it is left to the jury to decide whether or not the offender is conscious of wrongdoing.

Miscellany

Simple Treatment of Hemorrhoids.—It is strange, says the *Medical Standard*, how often patients with big thrombotic piles are sent away from physicians' offices with prescriptions for ointments which seldom relieve them, when it is so easy to inject a little cocain, to split the pile, to turn out the clot and to send the patient home rejoicing.

Avoid Wood Alcohol.—It is always and everywhere dangerous, and there is no warrant for its use or sale for purposes other than as a fuel. The harm it works is generally irremediable, and if it be not used at all, no vain regrets will follow. If physician and druggist will wait on the sanction of authority before employing it, it will soon pass from the market except for use as a fuel.—*Medical Summary.*

Meat Eating.—In the consumption of meat the United States heads all nations. The enormous quantity of 11,000,000,000 pounds of meat—147 pounds to each person—is used here yearly. Of this amount, 5,000,000,000 pounds are beef, 4,000,000,000 pork, and 800,000,000 mutton. Great Britain stands next, with nearly one-third less—100 pounds per inhabitant. Norway uses 80 pounds; France, 77; Spain, 70; Germany, 64; Switzerland, 62; Belgium, 61; Austro-Hungary, 60; Russia, Portugal, and the Netherlands, 50 pounds each; Italy, 24 pounds.—*Good Health.*

The Model Physician.—"Dr. McCormack outlined the work of a model medical society and drew a picture of the model physician, who, he declared, should be the cleanest man in the community, physically and morally; whose home life should be above reproach and an example to his clientele; who, as the representative of his profession, should be well and neatly dressed; whose income should be commensurate with the preparation involved and the sacrifices he must make if he is true to the traditions of his calling."—From the report of an address in the *Johnstown* (Pa.) *Daily Tribune.*

A Medical Law for Alaska.—Efforts will be made at the next session of Congress to secure the passage of a measure, providing for a medical law for Alaska. At present there is no law whatever regulating the practice of medicine in our great northwestern territory. . . . The people of Alaska are entitled to such protection as a good medical law will furnish them—just as much entitled to it as those of any of the states of the Union. There is no reason why a charlatan, with no education or experience, should be allowed to go there among our fellow citizens and risk the lives and health of the people, any more than it should be allowed in the other territories or states of the Union.—*Medical Sentinel.*

Malpractice Two Hundred Years Ago.—A French exchange states that a book published at Amsterdam in 1785 relates that a surgeon opened an artery by mistake in doing venesection on a wealthy patient. She succumbed not long after to the effects of this blunder, but in her will she left the surgeon a small yearly pension "not only to comfort him, but so that he could live the rest of his life without doing venesection any more." A similar occurrence is related in the *Journal Encyclopédique* of Jan. 5, 1772: A Polish princess had had the same experience, and added a clause to her will expressing her forgiveness and leaving the surgeon a small pension to indemnify him for the "loss of reputation that may follow my sad catastrophe." The article is headed: "Other Times, Other Manners," referring to the recent damage suits for comparatively trifling injuries.

Dried Lizards for Chinese Medicine.—The Board of United States General Appraisers at New York had before them, in the matter of protests 138, 283, etc., of Song Chong and others, the question of how dried lizards should be classified for duty. The lizards, dressed and dried, stretched on pieces of bamboo, were imported in pairs, supposed to be a male and female, bound together. It was stated that they were prescribed, together with herbs, by Chinese physicians, the lizards and herbs being cooked together and the broth administered to the patient as a tonic. After consideration, the board is of the opinion that the lizards were not used as medicine, but as one of the ingredients to be cooked with herbs to make a medicine, and that, therefore, notwithstanding they have for many years been classified for duty as Chinese medicine, they are really dutiable as non-enumerated unmanufactured articles.

Parathyroid Treatment for Eclampsia.—Professor Vassale of Modena has been applying in therapeutics the extract of the parathyroid glands. He has found the active principle of the parathyroid glands remarkably efficient in the treatment of puerperal eclampsia. The relations between the thyroid gland and pregnancy have long been studied, and it proved a great disappointment when thyroid treatment failed to display appreciable efficacy in the treatment of puerperal eclampsia. Vassale has taken up the study again, but uses the extract of the parathyroid glands alone. At the Italian Congress of Gynecology, last year, an experimental study was presented on "Thyroparathyroid Insufficiency and Eclampsia," which supplied an experimental foundation for parathyroid treatment. Pestalozza urges its trial on a large scale in the treatment of eclampsia. His editorial on the subject is in the *Ginecologia* for Feb. 28, 1905.

Prognosis of Diabetes.—Lagrange writes to the February *Revue des Mal. de la Nutrition* that if diabetics will practice moderation in all things and cultivate a tranquil mind, the great majority will live the usual span of life and many will surpass it. He has known many diabetics whose urine contained sugar up to the eighties. He knows of a certain gentleman who became diabetic at 50 and died at 91, without ever having restricted himself to any special diet or other measures, except his invariably daily long walk. There are

probably legions of other diabetics, he adds, who grow old placidly, unaware of their glycosuria, as they never happened to have their urine examined. The prognosis, therefore, of what is called essential diabetes, that is, not due to some organic lesion, is not so grave as is generally supposed, provided the individual shields himself a little more carefully than the common run of mankind from the accidental causes of disease.

Embalming of Mummies.—The *Semaine Médicale* states that the last number of the *Revue des deux Mondes* contains an article from Professor Lortet of Lyons describing recent discoveries in respect to the embalming of mummies. More than seventy yards of cloth about twelve inches wide were used in wrapping a mummy. This cloth was impregnated with a resinous alkaline solution, to which he attributes the preservation of the tissues. Ten large jars, carefully stoppered, full of a yellowish powder, have been found in a tomb near Thebes. The powder has been analyzed and found to contain an aromatic resinous substance and a large proportion of sodium salts, with some sand and clay. The ingredients of the resinous substance have been further recognized. It is evidently an extract of various aromatic substances, myrrh predominating. Cloth dipped in water in which some of this powder was dissolved presents the same appearance and odor as the cloth in which mummies are wrapped.

Lead Poisoning from Wall Papers During Pregnancy.—Lefour reports the case of a woman, seven months pregnant, who was seized with abdominal pain supposed to be related to her condition. Her husband suffered in the same way, and was advised to have his appendix removed. During an absence from home of some weeks all symptoms subsided, but on her return they reappeared. A miscarriage had already taken place in similar circumstances. A slight blue line was seen on the gums and the wall paper was suspected. The paper of the bedroom contained 23 gr. of lead per square meter, and the papers of two other rooms smaller amounts. On changing the paper and under appropriate treatment the symptoms were relieved. A living child was born at the eighth month, and though delicate seemed likely to live. Lefour examined eleven samples of wall paper taken at random and found nine to contain lead and the other two copper. The quantity of lead varied from 18 to 119 gr. per square meter, the larger amounts being in velvet papers.—*Jour. de Med. et de Chir. Prat.*

Typhoid and Paratyphoid Fever in Tropical Countries.—Marchoux was sent to Senegal on a scientific mission in 1896, and made a special study of these diseases. In an article in the *Revista Med.-Cir. do Brazil*, xiii, No. 1, he states that he found typhoid fever, as it occurs in temperate climates, extremely rare in Senegal. Its place is taken by the paratyphoid infections, and they are usually mild. When typhoid fever is imported it generally assumes a very severe form. In one epidemic from imported typhoid there were 35 deaths among the 170 typhoid patients in the hospital. The paratyphoid affections are very common in tropical countries, and probably include the pseudo-typhoid fevers, the "continuous malarial" fevers and the "mountain typhoid" observed in Brazil. The success of copious irrigation of the intestines in all these affections seems to confirm their intestinal origin, and that the large rather than the small intestine is involved. He was unable to detect any connection between these affections and the drinking water, but in the epidemic of typhoid above mentioned the water-borne source of infection was clearly evident and demonstrated that prophylaxis of typhoid can be effectually realized in the tropics as well as elsewhere.

Not Cured by Eddyism.—Dr. Guest, in a recent discussion before the Louisville Medical and Surgical Society, reported in the *American Practitioner and News*, made the following report to show the part psychology may play in the treatment of hay-fever: "I have a brother-in-law who suffers every summer with hay-fever. He has a relative who believes in Christian Science. She told him that she felt positive that she could direct him to a woman, a Christian Scientist, who could cure him. He at first objected because he hated to go to a woman physician. He arranged, however, to communicate with her daily by letter. When his hay-fever broke out he suffered with it all that day and night, and the next morning wrote her a note telling her to put him on treatment immediately. When he returned that night he felt improved and slept better. He wrote his second note next morning, and was much encouraged. The third day he repeated his letter writing, and stated that the symptoms had almost ceased. The running from the nose had practically ceased, the discharges from the eyes had ceased, and he was guying me about being cured by a Christian Scientist when regular physicians could do nothing for it. The night of the third day, when he came home to supper, he found a note from the Christian Scientist, stating that she had been in the country, and would put him under treatment the next day. Realizing that all his treatment had been only in his imagination, the symptoms reappeared with the same intensity as before. The day following he made arrangements to leave the city for the summer."

Verification of Death.—The injection of a stain into the tissues will decide the question of actual or apparent death with absolute certainty. If the blood is circulating to the slightest extent, the stain will spread throughout the system, while in case of actual death the stains remain localized at the point of the injection. Icard uses fluorescin, and years of experience have confirmed its complete reliability. About 2 gm. or 30 grains of fluorescein, that is, 10 c.c. (℥iiss) of a 20 per cent. alkaline solution of the stain are more than sufficient to determine the persistence of life in case of merely apparent death. The injection had better be made in the epigastrium or in the flank and the body covered and treated as if still alive. At the end of two hours, if the mucosæ have not turned yellow and the conjunctivæ green, the possibility of persisting life must be abandoned. Icard urges that the bottle of the stain and the syringe should be kept in a box, in charge of the head nurse, to be handed to the interne when he comes to verify the disease. He should make the injection and sign a printed certificate to that effect, mentioning also the other signs of death. The head nurse should sign the certificate below, two hours later, certifying that she had inspected the corpse before it was carried to the morgue, and noted that it was cold and that the mucosæ were not yellow and the eyes not green. Icard pleads that these certificates and the fluorescein test should be required as a matter of course in all hospitals. After two hours of negative response, the necropsy can be undertaken without waiting for signs of putrefaction to appear. Icard has been publishing a series of articles in the latest *Archives Générales de Médecine* on the necessity for more scientific verification of deaths, with the above suggestions for the technic. In a pamphlet recently published he urges the use of this simple and convenient test on the battlefield, as the wounded, in collapse of shock and exhaustion, might be readily assumed to be actually dead and be buried forthwith.

The Great White Plague.—Dr. John B. Huber of New York City, in *Popular Science Monthly*, says: It is with a very real sense of melancholy that one contemplates the long death-roll of those of the world's great men and women who have succumbed untimely to the tubercle bacillus, which is and has been through countless generations by far the most potent of all death-dealing agencies. Had it not been for this detestable parasite, Bastien Le Page might have given us another Joan-of-Arc to feast our eyes on; Rachel might for many years have continued to permeate the spirits of her audiences with the divine fire that was in her. Our navy did well enough in the 1812 war, as all the world knows; but what a rip-roaring time there would have been if John Paul Jones had lived to take a hand in it. We might be reading some more of Stephen Crane's splendid war stories; we might have had some more of Robert Louis Stevenson's delicious lace-work; Schiller might have given us another Song of the Bells; we might have taken another Sentimental Journey with Laurence Sterne; Henry Cuyler Bunner might have continued to delight us, and to touch our hearts; John Keats might have given us another "Endymion." Had the tubercle bacillus permitted, Nevin might have vouchsafed us another "Rosary;" von Weber another "Euryanthe Overture;" Chopin

might have dreamed another "First Polonaise;" and the tender flute notes of Sidney Lanier might even now be heard. Maria Constantinovna Bashkirtseff, Zavier Bichat, John Godman, Rene Theophile Hyacinth Laennac, Henry Purcell, John Sterling, Henry Timrod, Artemus Ward, Henry Kirke White, Henry David Thoreau, Baruch Spinoza—such names as these are but a moiety among those of the world's nobility, whose precious lives were cut off in thei rprime by the "Great White Plague."

Food and Feeding.—Few things can be more curious than the change which has been passing over the public mind, in the course of the last few years, with reference to food and feeding. Much has been made from time to time of the tendency to glorify intoxication which rollicks through the pages of Dickens, while it has to some extent escaped notice that his types of character are, as a rule, quite as much given to over-eating as to over-drinking; and that the meals at Manor Farm are as much in evidence as the beverages. Underlying the whole fabric of his fiction is an assured belief that to eat a great deal of food is an action not only meritorious in itself, but certain to be rewarded by good health, high moral tone, and enhanced physical vigor; and it is not too much to say that these were the prevailing convictions of the time in which he lived. The late Sir Henry Thompson, in the interesting volume on "Food and Feeding," which has now passed through many editions, was among the first to insist forcibly on the fact that the amount of food consumed should be diminished in advancing life; and Prof. Clifford Allbutt has lately written to the *Times*, on his return from a tour in America, to say that wholly new ideas about diet are beginning to prevail there, and that American men of science have obtained demonstration of the fact that all food in excess of the actual requirements of the body is a source of weakness instead of a source of strength; nervous force which might be better employed being consumed in its partial digestion and in its ultimate removal from the system. He tells us that this is especially true of nitrogenous material, while hydrocarbons can be burnt off in respiration with comparative facility. It would almost seem as if Nature, in attaching pleasure to the consumption of food, had carried her precautions against starvation to excess, and had ignored the risks incidental to repletion. An inquest was held a week or two since on an omnibus driver who died suddenly after an enormous meal of pork chops, and from no other discoverable cause than gastric distension by food and flatulence which arrested the action of a feeble heart.—*Critic and Guide.*

Poisonous Honey.—In the *New Zealand Medical Journal* for April Dr. E. D. Aubin has described the symptoms of honey poisoning observed in that country, principally in Maoris. As the poison is derived from plants visited by the bees, the symptoms of honey poisoning vary in different countries. In New Zealand only wild honey appears to cause poisoning. The source of the poison is thought to be the yellow flowers of a cress-like plant, the "whauriki," which grows chiefly in swamps. Three modes of onset of symptoms were observed—"gastric," "nervous" and "cerebral." In the gastric form giddiness and nausea are followed by severe and persistent vomiting, which may last off and on for two days. There usually is some abdominal pain. Apparently no irritant action is exerted on the bowels, for diarrhea was never observed. In the nervous mode of onset there are symptoms of irritation of the peripheral nerves—muscular tenderness and pains, and numbness in the arms and legs. Such symptoms are observed in the earlier stages of peripheral neuritis and in mussel poisoning. The cerebral mode of onset is illustrated by the case of a Maori who dropped down in a fit and became unconscious, and fits recurred at intervals. Delirium may be the first symptom. In severe cases the gastric, nervous and cerebral symptoms are usually combined, one set predominating. The characteristic symptom of honey poisoning is the epileptiform attack. It differs in no way from an ordinary epileptic fit and may be preceded by a cry. After the attack the patient may be quiet and may sleep or may be restless and delirious. In severe cases the fits recur and the patient is unconscious between them. In some cases a condition resembling the status epilepticus is induced and may be fatal. The fits generally cease in less than twenty-four hours. Slight vasomotor phenomena usually are present, the face and skin generally feeling very hot and swollen. The duration of the illness is from a few hours to two days, though nervous symptoms are generally complained of for a considerable time afterward. In fatal cases death usually occurs within twenty-four hours. Apparently the symptoms are due to a poison, probably of the nature of an alkaloid, which affects chiefly, if not solely, the nervous system. The gastric symptoms, Dr. Aubin thinks, are of cerebral origin—a view supported by the absence of signs of intestinal irritation.

Association News

THE PORTLAND SESSION.

Good Weather and a Fairly Large Attendance at the Fifty-Sixth Annual Session.

[By Special Telegram from Portland.]

The weather is perfect, warm and clear. The attendance is large, the registration on Monday and Tuesday totaled 1,416.

[NOTE: The total registration at Atlantic City in 1900 was 2019; at St. Paul in 1901, 1,806; at Saratoga in 1902, 1,425; at New Orleans in 1903, 1,993; at Atlantic City in 1904, 2,890.—ED.]

The President's Address.

The first General Meeting was held Tuesday, July 11, at 11 a. m., in the Armory of the Oregon National Guard. The retiring president, Dr. John H. Musser, Philadelphia, called the meeting to order and made an introductory address. Addresses of welcome were delivered by Hon. M. C. George, representing the state of Oregon; Dr. Harry Lane, mayor of the city of Portland, and Dr. George F. Wilson, representing the Oregon State Medical Society. Dr. Lewis S. McMurtry, Louisville, Ky., president of the association, gave his address on "The American Medical Association; Its Origin, Progress and Purpose," which is printed in full on pages 145-149 of this issue.

House of Delegates.

The first meeting of the House of Delegates was called to order at 10 a. m., Monday, July 10. After organization and preparation of the list of delegates in attendance, various committees were appointed, and then formal business was begun. The detailed minutes will be published next week.

Correspondence

Yeast in Tuberculosis—A Claim to Priority.

BUFFALO, N. Y., July 3, 1905.

To the Editor:—In a recent article by Huggard and Marland, in the *Lancet*, June 3, 1905, the action of yeast in tuberculosis and its influence on the opsonic index, they state that they have made observations on the influence, if any, of yeast, taken internally, on tuberculosis. They selected cases, chronic in nature, in which the patient had either "stuck in the mud" or was losing ground. A number of cases which were going downhill were also included in the observation. The results in some cases were striking, in others encouraging, in others almost *nil*. "In most cases the downward course either became less rapid or was arrested, and the stationary cases improved, etc." A good account of the article appeared in abstract in THE JOURNAL July 1, 1905, p. 75. In reading the original article I was struck with the absence of any reference to my previous communications on this subject. In a communication appearing in THE JOURNAL, A. M. A., 1901, I urged the use of brewers yeast in large doses in cases of tuberculosis, and in a paper, "Brewers Yeast in Therapeutics," published in *American Medicine*, October, 1902, I review the entire subject of "Brewers Yeast" with reference to its thera-

peutic application and cited four cases in which brewers yeast was used with satisfactory results. Since this time I have used fresh brewers yeast in all cases of tuberculosis, in private practice and in the wards of the German Hospital, and believe, as I did, and as amply verified in the paper of Huggard and Marland that brewers yeast is a valuable remedy in cases of tuberculosis. Brewers yeast has proved itself, if anything, even more gratifying in its results in a number of cases of bronchopneumonia where resolution of the lung and convalescence was too prolonged. By giving it in large doses of from two to three ounces three times a day resolution has been hastened, and the patients have improved in weight and strength.

JULIUS ULLMAN.

400 Franklin street.

Expulsion of Placenta Before Birth of Child.

CHICAGO, July 4, 1905.

To the Editor:—Relevant to the inquiry of Dr. Butt in THE JOURNAL, July 1, page 60, I would say that I was called on June 15 by a midwife to a case in which the third stage of labor had preceded the second, the placenta having been delivered about half an hour before my arrival. The os was the size of a silver dollar, with a right sacro-anterior presentation of the fetus. The woman's pulse was 90, small. She was pale and weak, but her condition was not alarming. Hemorrhage had ceased. In about forty minutes she expelled, unassisted, an exsanguinated male fetus, apparently at term. The midwife was reticent as to the history of the case and her connection with it, but I gathered from the husband, who could speak little or no English, that there had been hemorrhages for some weeks prior to the woman's confinement. She had had four children, all living, of whom the births had been normal. So far as known she made an uneventful recovery.

H. A. HASKELL, M.D.

GOODRICH, N. D., July 6, 1905.

To the Editor:—As expulsion of placenta before that of child seems rather uncommon, the following may be interesting: The patient was seen Aug. 5, 1904. Miss ——, primipara, white, aged 22, had taken some drug (probably ergot), to produce abortion. This had produced severe pains and some hemorrhage. On examination the placenta was plainly visible at vulva; there was a very foul odor. With patient under anesthesia the placenta and then a six-months fetus were delivered manually. The position of placenta before contractions of uterus was not known.

C. E. MCREYNOLDS, M.D.

Submucous Resection of Deflected Nasal Septa.

TOLEDO, OHIO, July 6, 1905.

To the Editor:—In my article on the above subject in THE JOURNAL, July 1, 1905, through an inadvertence on my part a foot note says: "Read before the American Laryngological Association at Toledo, Ohio." This was an error for which I offer my apologies. It should have stated, "Read before the middle section of the American Laryngological, Rhinological and Otological Society at Toledo, Ohio, Feb. 24, 1905." By kindly publishing this letter you will greatly oblige.

FRANCIS W. ALTER, M.D.

Marriages

ALVIN B. SNYDER, M.D., to Miss Elizabeth Sinclair, both of Chicago, June 26.

PHILIP ROVNO, M.D., to Miss Panna Julia Starotto, both of Philadelphia, June 25.

THOMAS G. HARRIS, M.D., to Miss Dora Bailey, both of Camden, W. Va., June 13.

JOHN F. SLOAN, M.D., Peoria, Ill., to Miss Sarah McDonald of Brimfield, Ill., June 24.

HARRY C. BUELL, M.D., to Miss Anna Augusta Faber, both of Canandaigua, N. Y., June 27.

CLARENCE K. DENGLER, M.D., to Miss Edna May Crotsly, both of Philadelphia, June 28.

NANCY A. RODGER, M.D., Menominee, Mich, and Rev. Chenoyeth of Toronto, Ont., June 21.

THOMAS A. SPEIDEL, M.D., Felicity, Ohio, to Miss Helen Dimmitt of Batavia, Ohio, June 27.

OTHO AUGUST FIEDLER, M.D., Milwaukee, to Miss Elizabeth Morris of Sheboygan, Wis., June 28.

HANS ZINSSET, M.D., to Miss Ruby Kunz, both of New York City, at Lake Mohegan, June 29.

WILLIAM H. REEDY, M.D., Towanda, Ill., to Miss Nellie Fincham of Bloomington, Ill., June 29.

JAMES W. SQUIRES, M.D., Churubusco, Ind., to Miss Margaret Snyder of New Era, Ind., June 28.

THOMAS M. ADERHOLD, M.D., Zeigler, Ill., to Miss Mae Sinicka of Chicago, at Du Quoin, Ill., June 21.

HENRY JOURNEAY WELLES, M.D., to Miss Elizabeth M. Jones, both of Minneapolis, Minn., June 28.

BENJAMIN HALL SEARING, M.D., New York City, and Miss Helene Stuckle of Montclair, N. J., June 29.

JOHN W. YOUNG, M.D., Fort Wayne, Ind., to Miss Ida Rhea of Frankford, Ind., at Nattawa, Mich., June 23.

FLOYD SWEETLAND CLARKE, M.D., Le Mars, Iowa, to Miss Emma Louise Cannon of Sioux City, Iowa, June 21.

Deaths

William C. Tyree. M.D. Kansas City (Mo.) Medical College 1876, ex-president and professor of ophthalmology and otology in the Kansas City Medical College; oculist and aurist to St. Margaret's, St. Joseph's and Scarritt Hospitals, Kansas City; member of the city council from 1902 to 1904; president of the Kansas City Academy of Medicine in 1891; died at El Paso, Texas, June 23, from tuberculosis, after an illness of eighteen months, aged 51. The active pallbearers at the funeral were members of the faculty of Kansas City Medical College. The board of aldermen, directors of the Kansas City Medical College and Kansas City Academy of Medicine adopted resolutions deploring Dr. Tyree's death.

Pascal H. Sawyer, M.D. Cleveland Medical College, 1850, one of the oldest and most prominent physicians of Cleveland; for a long time a member of the faculty of the medical department of the University of Wooster, Cleveland, died in St. Anthony's Hospital, Cleveland, June 26, from pneumonia, aged 68.

William H. Vincent, M.D. University of Buffalo (N. Y.) Medical Department, 1881, for several years a member of the board of supervisors of Cattaragus County, N. Y., died at his home in Hinsdale, N. Y., June 12, after a protracted illness, aged 51.

John Allen, M.D. Medical College of Ohio, Cincinnati, 1882, referee of the Kentucky State Board of Health for Kenton County, died at his home in Covington July 1, from spinal meningitis, after an illness of ten days, aged 48.

Charles Steinert, M.D. Berlin (Germany) Medical College, 1859, of Pittsburg, died at the home of his daughter in Waynesburg, Pa., June 26, from pneumonia, after an illness of two days, aged 65.

Isaac L. Lynch, M.D. Kentucky School of Medicine, Louisville, 1895, died at his home, Jolly Station, Breckenridge County, Ky., June 29, from tuberculosis, after a long illness, aged 36.

C. P. Gray, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1881, of Lowry City, Mo., died at the home of his daughter in Leesville, Mo., June 20, after an illness of two years.

George Eger, M.D. Medical College of Ohio, Cincinnati, 1894, bacteriologist to St. Francis' Hospital, Cincinnati, died at his home in that city June 30, after a short illness, aged 34.

Otto B. Hicklin, M.D. College of Physicians and Surgeons Keokuk, Iowa, 1876, died at his home in New London, Mo., June 28, after a protracted illness, aged 71.

William C. Weed. M.D. Buffalo, 1891, died at his home in North Coshocton, N. Y., June 27, after an illness of nine months, from nephritis, aged 59.

J. S. Bradley, M.D. Missouri Medical College, St. Louis, 1879, died at his home in Frankford, Mo., June 27, from disease of the liver.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

ISTHMIAN CANAL SERVICE.

Several correspondents ask whom to address for full information regarding positions in the medical service on the Panama Canal. They should address the Isthmian Canal Commission, Washington, D. C. A large number of details concerning the service were published in THE JOURNAL, Dec. 17, 1904, page 1881.

DR. JAPHETH SILAS BOYER WANTED.

DR. H. C. KERRICK, Brocton, Ill., wants the address of Dr. Japheth Silas Boyer, last heard from at Floriston, Nev., who graduated at Rush Medical College, Chicago, 1893.

WANTED: CASE OF AIR EMBOLISM DURING UTERINE PACKING.

DR. JOSEPH B. DE LEE, 34 Washington Street, Chicago, would like to know if there has occurred, in the practice of any of the readers of THE JOURNAL, an authentic case of air embolism, during the application of a uterine packing, either by means of the tubular packer or the uterine packing forceps, and at any time of the puerperal state.

State Boards of Registration

COMING EXAMINATIONS.

California State Board of Medical Examiners, San Francisco and Los Angeles, Cal., July 19. Secretary, C. L. Tisdale, San Francisco.

State Board of Health of Illinois, the Great Northern Hotel, Chicago, July 19-21. Secretary, J. A. Eagan, Springfield.

State Board of Health of West Virginia, Charleston, W. Va., July 18-20. Secretary, H. A. Barbee, Point Pleasant.

Nebraska State Board of Health, State House, Lincoln, Neb., August 9-10. Secretary, Geo. H. Brash, Beatrice.

Kansas April Report.—Dr. George F. Johnston, Lakin, reports the written examination held at Kansas City April 25-27, 1905. The number of subjects examined in was 15; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 108, of whom 97 passed and 11 failed. The following colleges were represented:

College.	Year Grad.	Per Cent.
PASSED.		
Rush Med. Coll.	(1904)	83
Kansas City Med. Coll. (1905), the grade of 76 was reached by one, 77 by three, 78 by four, 79 by three, 80 by seven, 82 by one, 81 by one, 83 by three, 86 and 87 by one each.		
Central Med. Coll., St. Joseph	(1905)	81, 78, 81, 79
University Med. Coll., Kansas City, Mo. (1905), the grade of 76 was reached by one, 77 by three, 78 by five, 79 by five, 80 by five, 81 by three, 82 by two, 84 by one, 85 by three.		
Homeopathic Med. Coll., Kansas City Mo.	(1900)	77
Beaumont Med. Coll.,	(1898) 78, (1905)	79
Ensworth Med. Coll.	(1905)	78, 79, 80
Medico-Chirurgical Med. Coll., Kansas City Mo.,	(1905)	76, 80, 80, 77, 81, 81.
University of Louisville	(1897) 75, (1904)	78
Louisville Med. Coll.	(1898)	80
Hahnemann Med. Coll., Chicago	(1876)	76
Kansas Med. Coll., Topeka, (1905), the grades of 75, 77 and 78 were reached by one each; 79 was reached by two; 80 by four, 81 by two, 83, 84, 85 and 87 were reached by one each.		
Eclectic Med. Inst., Cincinnati	(1905)	78, 80
Eclectic Med. Univ., Kansas City, Mo.	(1905)	76
University of Nashville	(1904)	79
Ohio Med. Coll.	(1904)	79
College of P. & S., Kansas City, Kan.	(1905)	80, 82
College of P. & S., St. Louis	(1905)	80
FAILED.		
College of P. & S., Keokuk	(1895)	74
Ensworth Med. Coll.	(1904)	73
Central Med. Coll.	(1905)	73
Eclectic Med. Univ.	(1905)	70
Ohio Med. Coll.	(1903)	74
Northwestern University	(1897)	72
Hahnemann Med. Coll., Chicago	(1890)	73
Medico-Chirurgical Coll., Philadelphia	(1892)	70
Barnes Med. Coll.	(1896)	71
Missouri Med. Coll.	(1900)	74
Gross Med. Coll.	(1902)	72

The general average attained by all representatives of the Kansas City Medical College who passed was 80.4; of University Medical College, 79.5; of the Medico-Chirurgical Medical College of Kansas City, 79.1; of the Kansas Medical College, 80.6.

Minnesota June Report.—Dr. C. J. Ringnell, secretary of the Minnesota State Board of Medical Examiners, reports the written examination held at St. Paul, June 6-8, 1905. The number of subjects examined in was 12; total number of questions asked, 95; percentage required to pass, 75. The total number of applicants examined was 105, of whom 83 passed and 22 failed. The following colleges were represented:

PASSED.		
University of Minnesota (1905), the grade of 79.1 was reached by three; 80.1, by three; 80.5, by two; 81.1, by five; 81.4, by two; 83, by three; 83.6, by two; 84.4, by two; 84.5, by two; 83.7, by three. The grades of 76.4, 76.9, 77.2, 77.6, 77.9, 78, 78.1, 78.7, 78.8, 78.9, 79.4, 79.5, 79.6, 79.7, 79.9, 80.2, 80.8, 82.8 82.2, 82.9, 83.2, 83.5, 83.8, 84.2,, 84.3, 84.7, 84.9, 85, 85.2, 85.6, 85.4, 86 and 86.1, were attained by one each.		
Hamline University (1903) 83.2; (1905) 83.6, 75.1, 80.1, 85.6, 82.4, 83.2, 83.1.		
Northwestern University	(1905)	90.2, 82.2, 84.8, 89.5.
Rush Med. Coll. (1901) 86.2; (1903) 86.3; (1904) 80.6, 82.4; (1905) 81.7.		
Johns Hopkins University	(1900)	86.2
College of P. and S., Chicago	(1897)	86.6
University of Toronto	(1905)	84.5
Creighton Med. Coll.	(1904)	82.5
FAILED.		
University of Minnesota (1905) 71.1, 76.5,* 73.4, 76.2,* 74.3, 76.9,* 73.9, 75.8,* 75.6.*		
Hamline University	(1904) 69.7, 68.6, 69.5, 65.2; (1905)	71.6
Kentucky School of Med.	(1893)	59.1
Kansas City Med. Coll.	(1905)	74.6
Milwaukee Med. Coll.	(1905)	66.5
Hahnemann Med. Coll. Chicago	(1902) 71.9; (1905)	75*
College of P. and S., Chicago	(1904)	69
Keokuk Med. Coll.	(1905)	64.5
Barnes Med. Coll.	(1897)	35.5

*The board did not grant a certificate because of low marks in the principal branches.

The general average attained by all representatives of the University of Minnesota who passed was 79; of Hamline University, 82.3.

Pennsylvania June Examination.—The examinations of the State Medical Examining Board were held in Philadelphia, Pittsburg and Harrisburg, June 27-30. Three hundred and twenty-nine candidates presented themselves for examination in Philadelphia and 121 in Pittsburg, making a total of 450. Two of the Philadelphia candidates were expelled for "cribbing." Fifty-six homeopathic candidates were also examined, and 18 candidates for the eclectic school were examined in Harrisburg. The applicants taking examinations in Philadelphia represented over eight states and nearly a dozen foreign countries. The following questions were asked:

PRACTICE.

1. Describe the symptoms indicative of intestinal perforation in typhoid fever and the treatment.
2. State the period of incubation, the day on which the exanthem usually appears, the symptoms, complications and period of infection of scarlatina, its relative degree of contagiousness and the means by which its spread occurs.
3. Describe the physical signs of mitral stenosis and explain what are its effects and how these effects are caused.
4. Give the causes and symptoms of ascites and tell how to recognize by what disease it is produced.
5. If summoned to a middle-aged person, discovered in a comatose condition, explain how to recognize on what disease the condition depends, and give the treatment for the uremic type of coma.

THERAPEUTICS.

1. Describe various methods for the reduction of hyperpyrexia, giving the rationale of each, and direct the treatment when due to sunstroke and to acute inflammatory rheumatism.
2. Explain how vascular tension is decreased and increased and what the conditions are when it should be respectively diminished or increased.
3. Give the symptoms and treatment of strychnin poisoning and name the disease to which it is similar, and tell how to distinguish one from the other.
4. Explain the principles governing the treatment of convulsions when due to a toxic agent in the blood; cite two conditions, and give their respective treatments.
5. State several conditions in which the bromids are indicated and explain how to administer large doses and cause the least general disturbance.

DIAGNOSIS.

1. State of what diagnostic import is the stool and cite three examples.
2. Diagnosticate infantile spinal paralysis.
3. Diagnosticate the so-called interstitial nephritis.
4. Differentiate carcinoma of the stomach and gastric ulcer.
5. Differentiate acute pneumonia and acute exudative pluritis.

HYGIENE.

1. Discuss the dangers proceeding from an impure water supply.
2. Describe the best methods for the disposal of excreta and sewage.
3. What hygienic measures should be recommended to prevent constipation?
4. What diseases of animals are communicable to man?
5. Discuss the general principles of ventilation.

ANATOMY.

1. Give a description of the brachial plexus and name five of its branches.
2. Describe the pyloric orifice of the stomach and give its topography.
3. Describe the frontal bone, including its articulations and sinus.

4. Locate the openings in the walls of the abdomen and give the important structures in relation therewith.
5. Describe the bladder in either sex, including its ligaments and relations and give its nerve supply.
6. Describe the pancreas and give its topography, outlet, nerve and blood supply.
7. Describe the hyoid bone and the muscles attached to it.
8. Describe the pharynx, its structure, boundaries, openings, nerve and arterial supply.
9. Name, locate and describe the ductless glands of the body.
10. Give the origin, course and topography of the ureters.

PHYSIOLOGY.

1. What is accomplished physiologically by the portal circulation?
2. Describe how, respectively, the intracranial arterial and venous blood pressure are regulated.
3. Describe the pulse mechanism.
4. State the source, composition and physiologic action of the gastric juice.
5. Give the functions of the trigeminal nerve.

PATHOLOGY.

1. Describe the structural changes of prostatic hypertrophy.
2. Describe the pathologic changes in disease of the vermiform appendix.
3. Give the pathologic condition characteristic of necrosis and caries of bone.
4. Describe the structural changes characteristic of the various types of hepatic cirrhosis.
5. Describe the changes in tissue in two forms of nasopharyngeal catarrh.

SURGERY.

1. Describe any one of the dislocations of the head of the femur and a method of reduction.
2. State how to determine the point of obstruction in ileus.
3. Describe the treatment for penetrating gunshot wounds of the abdomen.
4. Describe ligation of the brachial artery at its middle third and give the collateral circulation.
5. Describe the operation for suppurative mastoiditis.
6. Outline the general principles for the treatment of fracture of bones.
7. Give the symptoms and treatment for concussion of the spinal cord.
8. State the advantages and disadvantages of the various forms of suture materials.
9. Enumerate the symptoms respectively of cerebral concussion and compression and outline the treatment of each.
10. What are the indications for operative treatment in any form of hernia.

OBSTETRICS.

1. Describe true and false labor pains and give the treatment for the latter.
2. In the albuminuria of pregnancy what treatment should be instituted to prevent eclampsia and avoid premature delivery?
3. What are the causes of retained placenta, and the treatment for each?
4. What are the essential conditions requiring the forceps, and what precautions are necessary during their use?
5. Describe an effective method to prevent rupture of the perineum during labor.
6. What precautions are necessary to prevent infection of the baby's eyes at birth and what is the treatment of ophthalmia neonatorum?
7. Enumerate the symptoms which indicate the death of the child *in utero*, and state what course should be pursued in such a condition.
8. Give the mechanism of delivery in a left mento-anterior position.
9. State the causes and give the treatment of asphyxia neonatorum.
10. What are the symptoms of syphilis in the newly born child?

CHEMISTRY.

1. Give the chemical composition of the blood and state to what its coagulation is due.
2. Describe a test for diacetic acid.
3. Describe the properties and uses of boric acid.
4. State the chemical antidote for arsenic and write directions for its immediate preparation.
5. Describe a reliable test for the determination of glycosuria.

MATERIA MEDICA.

1. (a) What is salicin; (b) from what derived; (c) action and uses?
2. Define a tincture, an extract, an infusion, a triturate and an emulsion, giving an example of each.
3. Give the name of the active principle derived from a cardiac stimulant, a vasomotor depressant and a cerebral excitant.
4. State the composition of the following preparations and give the proper officinal name for each: Fowler's solution, Lugol's solution, Donovan's solution, Basham's mixture and Brown mixture.
5. Write two prescriptions, each containing one of the mercurial chlorids and give the dose and proper method of administration.

Wyoming June Report.—Dr. S. B. Miller, secretary of the Wyoming State Board of Medical Examiners, reports the written examination held at Cheyenne, June 7-8, 1905. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of applicants examined was 9, including one osteopath, all of whom passed. The following colleges were represented:

College.	Year Grad.	Per Cent.
Jefferson Med. Coll.	(1904)	77.9
University of Colorado	(1904)	79.8
Omaha Med. Coll.	(1898)	79.9
University of Nebraska	(1905)	78.8
Miami Med. Coll.	(1897)	81
University of Minn., Homeo. Dept.	(1904) 89.2; (1897)	91.4
Denver Homeo. Med. Coll.	(1905)	86.3

Reciprocity Can Not All Be on One Side.—At the annual meeting of the State Board of Medical Examiners of New Jersey, held at Long Branch, N. J., July 5, the following resolution was adopted:

WHEREAS, The educational and examining standards for the medical license of New Jersey are at least equal in all respects to those of New York, and in some respects higher, and

WHEREAS, The degree of unreasonableness in the matter of interstate endorsement on the part of New York can not be further ignored; therefore, be it

Resolved, That on and after October 16, the date of the next regular meeting of this board, the endorsement of medical licenses issued by New York will be suspended until further notice.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers U. S. Army, week ending July 8, 1905:

Rich, Edwin W., asst.-surgeon, ordered to Depot of Recruits and Casuals, Angel Island, Cal., pending repairs to transport *Thomas*.

Comegys, E. T., deputy surgeon general, retired from active service.

Little, Wm. L., asst.-surgeon, granted two months' leave of absence.

Steer, Samuel L., asst.-surgeon, relieved from duty at Army and Navy General Hospital, Hot Springs, Ark., and ordered to Fort Assiniboine, Mont., for duty. Granted two months' sick leave of absence.

Cox, Walter, asst.-surgeon, relieved from duty at Fort Banks, Mass., and ordered to Fort Reno, O. T., for duty.

Ford, Joseph H., asst.-surgeon, relieved from duty at Fort Reno, O. T., and ordered to sail from San Francisco, Sept. 30, 1905, for duty in Philippine Islands.

Ford, Joseph H., asst.-surgeon, authorized on arrival at San Francisco, en route to Philippine Islands for duty, to enter Army General Hospital, Presidio of San Francisco, for observation and treatment.

Lyster, Wm. J. L., asst.-surgeon, relieved from duty at Presidio of San Francisco, and ordered to Fort McIntosh, Texas, for duty.

Webber, Henry A., asst.-surgeon, relieved from duty at Fort Walla Walla, Washington, and ordered to Fort Banks, Mass., for duty.

Jones, Percy L., asst.-surgeon, ordered, in addition to his duties at Fort Preble, Me., to assume also the duty of examiner of recruits and attending surgeon to the recruiting party at Portland, Me.

Gibson, Robert J., surgeon, leave of absence extended three months

Reynolds, F. P., surgeon, ordered to proceed to Vancouver Barracks, Washington, for temporary duty as chief surgeon, Department of Columbia.

Brechemin, Louis, deputy surgeon general, promoted to lieutenant colonel, deputy surgeon general.

Hogue, Gustavus, I., contract surgeon, left Fort McDowell, Cal., for his home at North Lake, Wis., for annulment of contract.

Carpenter, Alden, dental surgeon, arrived at Fort Stevens, Ore., for temporary duty.

Jones, George H., contract surgeon, granted leave of absence for three months, fifteen days.

Davis, Oscar F., contract surgeon, returned from temporary duty at Fort Screven, Ga., to his proper station, Fort DeSoto, Florida.

Slater, Ernest F., contract surgeon, left Fort Hancock, N. J., on leave of absence for one month and sixteen days, with permission to go beyond sea.

Navy Changes.

Changes in the Medical Corps of the Navy, week ending July 1:

Dennis, J. B., surgeon, detached from Bureau of Medicine and Surgery and ordered to Navy Yard, Pensacola, Fla.

Fiske, C. N., P. A. surgeon, detached from Naval Medical School, Washington, D. C., June 27, and ordered to the *Marblehead*.

Guest, M. S., surgeon, detached from the *Lancaster* and ordered to the Naval Training Station, Newport, R. I., with additional duty on the *Constellation*.

Wieber, F. W. F., surgeon, ordered to Navy Yard, Pensacola, Fla., and to additional duty in command of the Naval Hospital at that yard.

Von Wedekind, L. L., surgeon, detached from the Naval Training Station, Newport, R. I., and ordered to the *Lancaster*.

Shiffert, H. O., P. A. surgeon, detached from duty under instruction at Naval Medical School, Washington, D. C., and ordered to the Naval Hospital, Philadelphia.

Tolfree, H. M., P. A. surgeon, detached from duty under instruction at Naval Medical School, Washington, D. C., and ordered to the Navy Yard, Norfolk, Va.

Iden, J. H., P. A. surgeon, orders of June 21 modified; ordered to Naval Hospital, Newport, R. I.

Bell, W. H., detached from duty with the Marine Detachment on the Isthmus of Panama and ordered to the *Dixie*.

Angwin, W. A., asst.-surgeon, detached from the Naval Academy, and ordered to the *Massachusetts*.

Hoen, W. S., asst.-surgeon, detached from the *Marblehead* and ordered to the *Chicago*.

McClanahan, R. K., asst.-surgeon, discharged from treatment at the General Hospital, Fort Bayard, N. M., and ordered to the Naval Recruiting Station, Baltimore.

Brown, E. M., asst.-surgeon, detached from the *Chicago*, and ordered to the Navy Yard, Mare Island, Cal.

McMurdo, P. P., acting asst. surgeon, detached from the Naval Recruiting Station, Baltimore, granted leave of absence for one month and ordered then to wait orders.

Spear, R., surgeon, detached from the Naval Hospital, Washington, D. C., and ordered to St. Petersburg, Russia, for special duty in connection with the naval medical and sanitary features of the Russo-Japanese war.

Wright, R. L., P. A. surgeon, detached from the Naval Hospital, Pensacola, Fla., and ordered home to wait orders.
Michels, R. H., asst.-surgeon, detached from the *Wilmington* and ordered home via the *Lawton*.
Strine, H. F., asst.-surgeon, detached from the *Barry* and ordered home via the *Lawton*.
Griebe, C. C., asst.-surgeon, detached from the Naval Station, Guam, and ordered to the *Oregon*.
Strite, G. E., asst.-surgeon, detached from the *Lawton* and ordered to the Torpedo Boat Flotilla, with station on the *Barry*.
Stoops, R. E., asst.-surgeon, detached from the *Lawton* and ordered to the Naval Station, Olongapo, P. I.
Owens, W. D., asst.-surgeon, detached from the *Lawton* and ordered to the *Villalobos*.

CHANGES FOR THE WEEK ENDING JULY 8, 1905.

Garton, W. M., P. A. surgeon, ordered to the Naval Hospital, Washington, D. C., for duty.
Murphy, J. F., asst.-surgeon, ordered to duty at the Marine Recruiting Station, Buffalo, N. Y.
Shaw, H., asst.-surgeon, ordered to the Naval Recruiting Station, Boston.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending July 5, 1905:

Blue, Rupert, P. A. surgeon, granted extension of leave of absence for seven days.
Currie, D. H., P. A. surgeon, granted leave of absence for two months, from July 6.
Bean, L. C., acting asst.-surgeon, granted leave of absence for twenty days, from July 1.
Smyth, F. R., acting asst.-surgeon, granted leave of absence for twenty days, from July 10.
Thomas, J. G., acting asst.-surgeon, granted leave of absence for 30 days, from July 1.

Society Proceedings

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting of the North Branch, held May 16, 1905.

DR. BEN HIRSCH in the Chair.

A paper on "Dangers of the Domestic Use of Illuminating Gas and the Means of Avoiding Them" was read by Dr. Henry Leffman, which has been published in THE JOURNAL, June 3, 1905.

The Medicolegal Relations of Gas Poisoning.

DR. M. L. COPLIN referred first to the chronic gas poisoning, of which a great deal is seen on the continent, but very little here. He cited as two forms of this condition, combination with the hemoglobin and combination with the cells of the central nervous system, which very closely resembles the condition seen in tetanus poisoning. After describing in detail the conditions existing in these cases, he stated that the exact process was still unknown, but that doubtless in the chronic cases it was attributable to pathologic resistlessness and inability of the patient to build himself up; he referred to the fact that it had been demonstrated that there was an increase of arsenic in the body. He cited a number of cases in which death was caused by the inhalation of the gas, and discussed the medicolegal questions which have been raised in several important cases, particularly where related to life insurance contracts, among which was one in which the question as to whether the death was accidental or not was raised, one instance being that of a man who had previously suffered from angina pectoris. He then considered in detail the rubber tubing, automatic heating apparatus, etc. He also raised the point as to whether the changes seen in the blood were due to the inhalation of the gas, or were postmortem changes.

The General Characteristics of Gas Poisoning as Seen in Philadelphia.

DR. WILLIAM S. WADSWORTH, coroner's physician, reported a personal experience he had had when a medical student by being almost overcome with furnace gas, and stated that it was a very easy matter for serious results to be produced. Although he recognized the dangers resulting from the use of rubber tubing for connecting gas lights, he felt that the public would not tolerate too radical measures in regard thereto, and that probably the most that would be borne would be regulation of the length of the tubing, and the requirement that a fairly good quality be used. He referred to the more common employment of water gas at the present time, and the dangers thereof, and contrasted them in detail with those from coal gas. He called particular attention to the increasing number of deaths from this cause during the last few years, the most marked being in murder and suicide. Defective fixtures and apparatus were cited as fertile causes of the accidental cases, particularly stoves in which there is insufficient combustion. The pathologic conditions were outlined in detail, prominent among which are a puffy pink appearance of the skin and in extreme cases a carmine tint, and there is a tendency to rather rapid decomposition.

DISCUSSION.

MR. WILLIAM MCDEVITT, inspector of the Fire Underwriters' Association, stated that fires had so frequently occurred by reason of defective rubber tubing connections, that the inspectors would not now pass stoves connected in this manner. He felt that the public should be carefully educated concerning this danger and suggested as the most appropriate persons to see that this is accomplished are the officials of the companies selling the gas stoves. He called attention to the escape of gas from the heater, oftentimes due to an undetected crack in the firepot, and also to the danger of fire arising from a very small, unsuspected opening in the gas-pipe in the cellar.

MR. WASHINGTON DEVEREUX, another of the inspectors of the Fire Underwriters' Association, directed attention to the poor quality of the tubing used for connecting drop lights with the gas fixtures. He then stated that there was very great danger of the automatic electric lighting gas burners becoming leaky, especially those operated by a push button, a slight jar, such as walking over the floor, being sometimes sufficient to turn them on.

DR. SAMUEL WOLFE reminded the society of the liability of accidents arising through slot meters by the gas becoming exhausted and going out automatically, and then being turned on again by the mere putting of a coin in the slot, some of the burners being open.

DR. J. THOMPSON SCHELL related a case of this nature.

Regular Meeting of the South Branch, held May 26, 1905.

DR. L. J. HAMMOND in the Chair.

DR. S. C. RUNKLE reported a case for diagnosis.

The Summer Diarrheas in Children.

DR. J. P. CROZIER GRIFFITH cited statistics showing the mortality in early life. During the first year it is 18.33 per cent in the European states, and in the registration area in the United States 18.28 per cent., nearly one-quarter of which are due to diarrhea. In European countries the greatest mortality occurs during the cold months, while in this country it is just the converse. The causes assigned are: 1, hot weather; 2, artificial feeding; 3, bacteria. He cited statistics showing that by far the greater number of deaths occurred in bottle-fed babies, being mainly due to the difference in the composition of the milk, and to the fact that even though the milk has been sterilized or pasteurized, the germs may be removed thereby, but the poison resulting from the germs has not. The treatment should depend on the form of the diarrhea and the length of its duration. He considered the different forms under the head of acute dyspeptic diarrhea, milk poisoning, cholera infantum and enterocolitis. The treatment he classified under four headings—starving, washing, resting and healing. He recommended that the child be put on barley water until the vomiting and diarrhea ceased. In order to remove the poisonous matter, if early, washing out the stomach; if later, the washing out of the intestinal canal by means of purgatives, etc., is of value. Food should not be given until the symptoms subside and then the best results will be secured by starting off with a cereal treated with malt. Of the remedies having a healing effect bismuth was especially mentioned.

DISCUSSION.

DR. JOHN S. PEARSON said that the difficulty of treatment

of these cases increased in proportion with the length of time the condition had been present. He commented on the value of rest, bismuth, and the substitution of goat's milk for cow's milk. He has secured good results from nitrate of silver when there was positive inflammation of the mucous membrane of the bowel.

DR. JOHN B. TURNER suggested the value of egg albumin as a food for these patients.

DR. WILLIAM S. HIGBEE referred to the fact that the number of cases of these conditions had decreased very much during the last ten years, probably due to improved sanitary conditions and diet. He rarely gives fractional doses of calomel, preferring to give one or two grains, to be followed by a dose of castor oil. In the treatment of the second stage of the condition he recommended bismuth; in severe cases opium and regulation of the diet.

DR. S. C. RUNKLE emphasized the value of bismuth and expressed the belief that the reason it failed in many cases was because too small doses were given.

DR. GRIFFITH stated that he would not hesitate to give morphia, hypodermically, for a state of collapse in cholera infantum, and that he considered 1/100 of a grain a very moderate dose for a child one year old. He reviewed the serum treatment and stated that as yet the results were not very encouraging and that diarrhea from other causes than dysentery would occur.

Uses and Abuses of the Free Dispensary.

DR. R. O. KEVIN cited four classes of patients as improperly frequenting the institutions: 1. People who can, but do not want to pay. 2. People not knowing a specialist, but desiring a specialist's opinion without paying a specialist's fees. 3. Sufferers from alcohol and other habits. 4. Hypochondriacs, who try to find relief from real or fancied wrongs. He emphasized that those concerned in the management should use their best endeavors to exclude unworthy patients.

DISCUSSION.

DR. W. S. HIGBEE felt that the chief in charge of the clinic should guard carefully the character of the patients that are admitted for treatment, and should refuse to treat those who were not proper subjects.

DR. J. P. CROZIER GRIFFITH stated that he believed in some instances the abuse was due to a too ardent desire on the part of the physician in charge of the clinic to have a large dispensary roll.

DR. S. C. RUNKLE felt that the fault was not alone with either the general practitioner or the specialist, and believed that it would be to a certain extent remedied if the specialist would have more moderate charges for those recommended by their attending physician as unable to pay full fees.

Regular Meeting of the Kensington Branch, held May 9, 1905.

DR. J. C. CHESTNUT in the Chair.

Excision of the Spinal Accessory Nerve for Torticollis.

DR. WILLIAM H. MORRISON reported cases and exhibited the patients, the first being a girl 11 years of age, who two years ago was taken with a stiff neck, apparently an ordinary attack of rheumatic torticollis, involving the right sternocleido muscle. Treatment by the salicylates, iodids and the various nerve sedatives, such as bromids, belladonna and cannibis indica was without avail and the muscle remained in a state of intense tonic spasm, being relieved only under ether. A tenotomy of the sternocleido mastoid was done, but without relief, and in January, 1904, three-quarters of an inch of the spinal accessory nerve was excised. An anterior incision was made along the anterior upper border of the muscle, being careful to avoid the internal jugular vein. The wound healed without complications and now fifteen months later, the child is able to rotate the head in all directions.

Nasal Saddleback Deformity Treated by Paraffin Injections.

The second case, shown by Dr. Morrison, was one of paraffin injection to correct saddleback deformity of the nose, in a boy about 12 or 14 years of age, resulting from a blow on the nose, displacing the nasal septum. About six months after the accident, Dr. Morrison operated on the septum by making a stellate incision by means of forceps and straightening and holding the septum in position by means of a nasal splint until it could heal, and, after healing, the bridge of the nose was built up by means of subcutaneous injection of paraffin. He stated that the paraffin should be mixed with white vaselin to bring it down to a melting point of from 110 to 115 degrees F. The paraffin may be injected in a semisolid state by means of a metal syringe, under which circumstances he thought there was less danger of producing embolism of the central retinal artery or gangrene of the skin than by using it melted to a liquid state.

DISCUSSION.

DR. J. COLES BRICK referred to the fact that the melting point of paraffin was given from 110 to 140 degrees F., and stated that when he had requested paraffin made with a melting point of 110 to 115, the chemist had informed him that a foreign substance could not be mixed with the paraffin, and that any substance that was added for the purpose of reducing the melting point would merely be melted out and the paraffin would remain intact. He stated that he now used the paraffin in a solid form by means of a piston syringe with a ratchet arrangement, which prevented the possibility of extravasation into the tissues.

Treatment of Hemorrhoids by the General Practitioner.

DR. COLLIER F. MARTIN dealt particularly with methods of diagnosis and treatment suitable for employment by the general practitioner, and expressed the belief that the majority of patients can be completely and satisfactorily cured with a minor operation under nitrous oxid. He deprecated the practice of taking the patient's word for it that there was some rectal condition present and ordering ointments or suppositories, and advised routine examination in all cases. For the successful handling of this condition, he believed that the physician must train himself to make the diagnosis from the symptomatology and careful local examination. Numerous instruments are not required, as the majority of cases can be diagnosed by inspection and digital examination, the speculum being useful to confirm the diagnosis and in cases of ulceration and catarrh of the sigmoid flexure, a proctoscope may be necessary. He stated that the character of the speculum was largely a matter of personal preference and that he used a small conical one. He then took up the etiology and the classification of the condition, citing as the two causes, obstruction and infection, the former either mechanical or anatomic, and the infection being usually attributable to the lymphatics, although in external cases, it might be of outward origin.

The treatment, he stated, should be directed (1) to the removal of the congestion, and (2) to the removal of the tumor, and for the former divulsion of the sphincter alone will often accomplish the result. The different methods of operation, particularly injection, ligature and clamp and cautery were gone into in detail, the first he considered applicable for those cases who would not submit to an anesthetic, while for those who were willing to do so, he preferred the clamp and cautery to the ligature. External hemorrhoids are very often cured by divulsion of the sphincter under nitrous oxid gas, while for internal venous hemorrhoids the best results are secured by injection, when general anesthesia is refused.

DISCUSSION.

DR. J. COLES BRICK emphasized the importance of digital examination of all cases of rectal trouble, citing as illustrative of the omission to do so, a case in which a fishbone near the anus had been found, and referred to the reflex symptoms cited by Dr. Hilton, i. e., pain in the left leg as an indication of rectal trouble. The careful routine examination of the coccyx was also recommended and the value of divulsion of the sphincter commented on favorably. The injection method he viewed as an excellent plan of treatment in the hands of an experienced operator, but questioned the advisability of

its employment by the general practitioner, and stated that the carbolic acid solution employed should not be stronger than 50 per cent.

DR. A. G. BAKER believed that each case must necessarily possess a certain amount of individuality and the treatment to some extent be governed accordingly. For the purposes of examination he considered a bivalve speculum best that has one valve fenestrated and the other solid. In the removal of piles by the injection method, he felt that the best results were secured by the injection of two or three drops of pure carbolic acid. He stated that he had secured good results with external piles by the use of an ointment of ten grains of morphia, one dram of carbonate of lead, and one ounce of unguent stramonium. For internal piles was recommended the use of about equal parts of cream of tartar and sulphur taken internally.

DR. WILLIAM H. MORRISON stated that the diagnosis must rest entirely on visual and digital examination. As illustrative of the importance of care in making such examination he cited the case of a young woman, whose condition had been cited as hemorrhoids, when it was really a small anal fissure, which was promptly cured under appropriate treatment. Another case diagnosed as hemorrhoids proved to be cancer of the rectum; another case which was diagnosed as hemorrhoids, digital examination proved to be due to a large splinter of wood. In regard to the treatment, he stated that he had always secured good results with the ligature, which was the only form he had ever employed.

DR. FRANKLIN BRADY had also been limited in his experience to the ligature operation, but believed the injection method to be of great value in the hands of the experienced operator.

DR. MARTIN recommended for the injection method a 50 per cent. solution of phenol, preceded a few days before by divulsion under nitrous oxid. He also laid particular stress on the extent of divulsion, not to tear completely through the muscular fibers, but to stretch them until a few fibers just begin to be felt to separate.

ARKANSAS MEDICAL SOCIETY.

Thirtieth Annual Meeting, held at Little Rock, May 16-18, 1905.

The President, DR. JOSEPH P. RUNYAN, Little Rock, in the Chair.

Welcome.

In the absence of Mayor Lenon, Dr. Edwin Bentley extended a cordial welcome to the society in behalf of the state, and also for the Pulaski County Medical Society, to which Dr. Buchanan Hatchett made a fitting response.

President's Address.

The subject of the address of Dr. Joseph P. Runyan was "Some of the Needs of the Medical Profession, and the Measures Best Adapted to the Supplying of Such Needs," in which he called attention to the necessity of the society adopting the standard constitution and by-laws recommended by the American Medical Association, and also emphasized the necessity for the securing of proper legislation and the value to the society of a good legislative code. He urged the need of a higher literary education among medical men, and stated that he hoped to see the day when a literary degree would be required as a requisite for entering on medical studies. The Arkansas Medical School, he stated, should be a part of the University of Arkansas and should be supported by the state, with specialists employed as teachers, and there are urgent needs for a state bacteriologist and for a state pathologic laboratory.

Organization.

The secretary reported a net membership gain of 130 dur- the year, and an increase in receipts over the previous

eports from ten councilor districts showed that there were y thirteen counties which remained unorganized in the state and in most of these organization would be effected during the coming year.

First District.—Dr. G. A. Warren, Black Rock, reported that only Crittenden and Poinsett counties remained unorganized.

Second District.—Dr. Joseph C. Cleveland, Bald Knob, reported that Fulton, Izard and Sharp counties, the only three in his district not yet in the society, would be organized before the next meeting.

Third District.—Dr. Montague Fink, Helena, reported that Cross county was the only county in his district which was still unorganized.

Fourth District.—Dr. Vernon McCannon reported that Bradley county was the only one unorganized in his district and that this would be organized shortly.

Fifth District.—Dr. Morgan Smith, Eldorado, reported that all counties in his district were organized and in good condition, and practically all the physicians in the society.

Sixth District.—Dr. S. M. Carrigan, Hope, reported only one unorganized county in his territory, namely, Polk county, and the membership rapidly increasing.

Seventh District.—Dr. C. Travis Drennen, Hot Springs, reported that there were still two counties unorganized in his district, Montgomery and Scott.

Eighth District.—Dr. Edward R. Dibrell, Little Rock, reported that all counties in his district were thoroughly organized.

Ninth District.—Dr. John B. Bolton, Eureka Springs, reported that Stone and Van Buren counties were still unorganized.

Tenth District.—Dr. St. Cloud Cooper, Fort Smith, reported that one county in his district was unorganized, namely, Madison county.

Election of Officers.

The election of officers resulted as follows: President, Dr. S. M. Carrigan, Hope; vice-presidents, Drs. William S. Stewart, White Oak; Matthew S. Dibrell, Van Buren, and D. W. Bright, Lewisville; secretary, Dr. Charles C. Stephenson, Little Rock; councilors, first district, Dr. J. A. Warren, Black Rock; third district, Dr. Montague Fink, Helena; fifth district, Dr. Frederick E. Harrison, Fordyce; seventh district, Dr. John L. Butler, Sheridan, and ninth district, Dr. John B. Bolton, Eureka Springs; delegates to the American Medical Association, Dr. Herbert H. Canfield, Siloam Springs; alternates, Drs. Morgan Smith, Eldorado, and Lorenzo B. Gibson, Little Rock.

The next meeting will be held at Pine Bluff.

The banquet was attended by 160 members, Dr. Frank Vinsonhaler presiding as toastmaster.

ARIZONA MEDICAL ASSOCIATION.

Annual Meeting held at Prescott, June 1-2, 1905.

The President, DR. WILLIAM H. WARD, Phoenix, in the Chair.

In the absence of Mayor Goldewater, City Councilman J. W. Wilson welcomed the association to Prescott, and Dr. Henry Hughes, Phoenix, responded on behalf of the association.

In his annual address the president, Dr. William H. Ward, reviewed the history of medicine and pointed out helpful lessons from the experience of the past.

Diseases of School Children.

The committee on the results of diseases of the eye, ear and nose of school children made its report through its chairman, Dr. Ancil Martin, Phoenix, and a resolution was presented by Dr. J. W. Coleman, Jerome, requesting that the matter of the examination and care of school children as regards these diseases, be brought to the attention of the Territorial Board of Health, through the territorial health officers.

The annual address was delivered by Dr. William W. Whitmore, Tucson, on the "Therapeutics of Alcohol," in which he reviewed the chemistry and physiology of alcohol and its applicability as a medicinal agent.

DR. ANDREW W. MORTON, San Francisco, made an instructive and interesting demonstration of spinal anesthesia at Mercy Hospital, performing an operation for hernia, a second for a removal of a vesical tumor, and the third an operation on the foot under local anesthesia.

In the evening the annual banquet was held, over which Dr. John S. Barrett presided.

American Medical Association.

In response to this toast, Dr. Andrew W. Morton, San Francisco, emphasized the value of organization and co-operation and the benefit that accrues to the individual physician from meeting his brother practitioners and exchanging ideas through the mediums of association meetings.

Election.

The following officers were elected: President, Dr. J. W. Coleman, Jerome; vice-presidents, Drs. Arthur W. Olcott, Tucson; Otto E. Plath, Phoenix, and Albert E. Ealy, Kingman; secretary, Dr. John W. Foss, Phoenix (re-elected); treasurer, Dr. R. F. Palmer, Roosevelt; councilors, Drs. Clarence E. Yount, Prescott; Ancil Martin, Phoenix, and Hiram W. Fenner, Tucson; delegates to American Medical Association, Dr. Henry A. Hughes, Phoenix; alternate, Dr. Frank W. Sawyer, Prescott; and essayist, Dr. Henry P. Thomoson, U. S. Army, Fort Whipple. The next meeting will be held at Phoenix.

CONNECTICUT MEDICAL SOCIETY.

One Hundred and Thirteenth Annual Meeting, held in Hartford, May 24-25, 1905.

The President, DR. WILLIAM H. CARMALT, New Haven, in the Chair.

DR. EVERETT J. MCKNIGHT, Hartford, chairman of the committee on legislation, outlined a plan for changing from the present organization to a new one.

Anti-Vaccination Legislation.

DR. WILLIAM H. CARMALT reported at length the history of the attempt at anti-vaccination legislation and suggested that a resolution be adopted reaffirming the necessity of keeping compulsory vaccination laws on the statute books.

Reports of Officers.

DR. NATHANIEL E. WORDIN, Bridgeport, the secretary, reported that the society numbers 758, a net gain of 22 for the year, during which 50 joined the society and 15 died.

DR. WILLIAM W. KNIGHT, Hartford, the treasurer, reported receipts of $2,345.58, and a balance in hand of $864. A per capita tax of $3.00 was levied.

DR. CHARLES A. TUTTLE, New Haven, reported that the committee on medical registration had examined 94 applicants during the year, 74 of whom passed.

Election of Officers.

The following officers were elected: Dr. Nathaniel E. Wordin, Bridgeport, president; Drs. Frederick A. Morrell, Putnam, and Eli P. Flint, Rockville, vice-presidents; Dr. Walter R. Steiner, Hartford, secretary, and Dr. Joseph H. Townsend, New Haven, treasurer.

The annual banquet was held at the Allyn House, May 26.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Belladonna.

Belladonna, according to Beasley, is valuable as an antispasmodic and is of service in cardiac palpitation, dysmenorrhea, constipation, laryngismus stridulus, night sweats of phthisis, nocturnal incontinence of urine, cystitis, spasmodic asthma and whooping-cough. It may be employed both externally and internally in neuralgic affections, in checking the secretion of milk, in relieving cramp, whether of body or limb, in relieving spasm of sphincters, of uterus, bladder or rectum, and in relieving chordee. It should be kept in mind that some persons show an idiosyncrasy to belladonna, small doses in some instances producing delirium and an erythematous rash.

The linimentum belladonnæ is of value in neuralgic and rheumatic pains.

NOTE.—The liniment is made of the following:

℞.	Liq. extractæ belladonnæ	ʒvi	25
	Camphoræ	gr. xxxviii	2 | 5
	Aquæ dest.	m. lxxv	5
	Alcoholis, 90 per cent., q. s. ad	ʒxiiss	40

The ointment is serviceable as an application in spasm of the sphincter. For spasm of the urethra or chordee it may be applied along the under side of the penis. It is also recommended as a local application over carbuncles.

The linimentum belladonnæ may be used alone or in combination with other liniments in the treatment of lumbago as follows:

℞.	Linimenti belladonnæ		
	Linimenti chloroformi		
	Linimenti aconiti, āā	ʒi	30

M. Ft. linimentum. Sig.: One tablespoonful to be well rubbed into the painful area; the part is then to be covered with hot spongiopiline.

In the treatment of constipation the following combinations are recommended, the dose of each to be regulated to suit the individual case:

℞.	Ext. belladonnæ	gr. 1/4	015
	Pulv. capsici	gr. 1/4	015
	Ext. cascaræ	gr. iii	20

M. Ft. pil No. i. Sig.: One such pill at bedtime as required. Or:

℞.	Ext. bellad. alc	gr. 1/4	015
	Pil. rhei co	gr. iii	20

M. Ft. pil. No. i. Sig.: One such pill at bedtime. Or:

℞.	Ext. belladonnæ	gr. 1/6	01
	Aloini	gr. 1/4	015
	Strych. sulph.	gr. 1/40	0015
	Pulv. ipecac	gr. 1/4	015

M. Ft. pil. No. i. Sig.: One pill night and morning, as required.

To relieve palpitation and heart pain the following is recommended:

℞.	Tinct. belladonnæ	m. v	30
	Tinct. camph. co	m. xv	1
	Syr. aurantii	ʒss	2
	Aq. camphoræ q. s. ad	ʒi	30

M. Sig.: To be taken at one dose and repeated three times daily if required.

In case of cardiac weakness the following is of value:

℞.	Tinct. belladonnæ	m. v	30
	Tinct. cacti grandiflor.	m. v	30
	Aq. chloroformi q. s. ad	ʒi	30

M. Sig.: To be taken at one dose in a little water and repeated once daily.

To check the flow of milk the author recommends the following:

℞. Emp. belladonnæ.

Sig.: A piece six inches in diameter to be applied to each breast.

To check night sweats the following combination is recommended:

℞.	Ext. bellad. alc	gr. 1/4	015
	Agaricin	gr. 1/6	01

M. Ft. pil. No. i. Sig.: One at bedtime to check the night sweats of phthisis.

In spasmodic asthma the following:

℞.	Tinct. belladonnæ	m. xv	1
	Tinct. lobeliæ ætheræ	m .x	65
	Tinct. jaborandi	m. xv	1
	Aq. chloroformi q. s. ad	ʒi	30

M. Sig.: At one dose to relieve the attack.

In cases of marked irritability of the bladder the folllowing is recommended:

℞. Tinct. belladonnæ.....m. viii | 50
Infusi buchu q. s. ad.....℥i 30 |

M. Sig.: To be taken in half a glassful of barley water and repeated every six hours.

Shoemaker recommends the following ointment containing belladonna in the treatment of boils and carbuncles, also in local abscess formations in herpes zoster:

℞. Ung. belladonnæ.....℥ss 2 |
Lanolini .....℥ss 15 |
Cerati plumbi subacetati.....℥iii 12 |
Ung. zinci oxidi.....℥ss 15 |

M. Sig.: To be applied locally once or twice daily.

A lotion or an ointment containing belladonna is recommended by this author in the treatment of pruritus of the genitals and urticaria, and in chronic eczema when attended with excessive itching:

℞. Naphthol .....gr. xx 1 | 30
Ung. camphoræ
Ung. menthol, āā.....℥ii 8 |
Ung. belladonnæ.....℥ss 15 |

M. Ft. unguentum. Sig.: To be applied locally. Or:

℞. Acidi carbolici .....℥ss 2 |
Linimenti belladonnæ.....℥ii 60 |
Glycerini
Aq. rosæ, āā.....℥iv 120 |

M. Ft. lotio. Sig.: Apply locally.

In relieving leucorrhea the following is recommended:

℞. Ext. bellad. fol. alc.....gr. xxiv 1 | 65
Acidi tannici .....℥iss 6 |
Olei theobrom., q. s.

M. Ft. suppos. No. xxiv. Sig.: Three or four suppositories to be used daily.

In the treatment of neuralgia, which is often a sign of defective nutrition and associated with anemia, the author recommends the following combination:

℞. Ext. bellad. fol. alc.....gr. iv | 25
Quin. sulph.....gr. xxii 1 | 50
Ferri sulph. exsic.....gr. vii | 50
Strych. sulph.....gr. 1/4 | 015
Acidi arsenosi.....gr. 1/5 | 012
Oleoresinæ piperis.....m. viiss | 50

M. Ft. pil. No. xv. Sig.: One pill three times a day.

Inflammation of the pharynx and tonsils is frequently lessened by some preparation of belladonna, and for this purpose Shoemaker recommends the following combination:

℞. Potass. chloratis.....gr. lxxx 5 |
Acidi hydrochlor. dil.....℥iss 6 |
Tinct. aconiti.....m. xv 1 |
Tinct. belladonnæ fol.....℥ss 2 |
Infus. rhois glabræ q. s. ad.....℥iv 120 |

M. Ft. solutio. Sig.: One tablespoonful in water every three hours.

Atropin may in a great many instances be substituted for the other preparations of belladonna. The following, known as Ludlow's ointment, is of value applied locally in the treatment of boils and other local suppurating processes:

℞. Atropinæ sulph..... gr. ss | 03
Aconitinæ .....gr. iss | 09
Olei tiglii.....m. ii | 12
Liq. petrolati .....℥i 30 |

M. Ft. unguentum. Sig.: Rub in a piece the size of a pea over the affected area and repeat once daily.

Cerebrospinal Meningitis.

The treatment of cerebrospinal meningitis, according to Huber, in *Med. News*, consists in the proper isolation of the case in charge of a competent nurse and in a well-ventilated room. The room should not necessarily be kept dark, as a bandage over the patient's eyes serves the same purpose. The nutrition must be maintained by a proper liquid diet. An ice-bag should be applied to the head, and the head and neck should be properly supported. It is said that raising the head of the bed from six to eight inches sometimes gives relief. Water should be given in abundance, and care should be observed as to the elimination and the usual methods of reducing temperature should be carried out. The nasopharynx should be properly cared for, as it is a frequent seat of catarrhal condition in these cases, and the nares should be irrigated with a normal saline solution once or twice daily. Forced feeding may have to be resorted to early in the disease owing to a paralysis of the muscles of deglutition. Pain and restlessness must be relieved by morphin or codein, by the mouth or hypodermically. Bromids may serve the purpose. Severe vomiting in the later stages, according to the author, is relieved by lumbar puncture, hypodermic injections of small doses of morphin, ice to the epigastrium and care as to diet. If pulmonary edema occurs, sodium benzoate or caffein subcutaneously is recommended as giving prompt relief. Adrenalin is also spoken of favorably.

Packs or baths at a temperature of from 90 to 98 F., with or without mustard, will relieve the irritability, improve the circulation and induce sleep.

Aufrecht's method is also spoken of as of value; it consists in placing the patient in a hot bath, 104 F., with an ice-cap to the head and continued for fifteen minutes at a time, once or twice daily. It is claimed that by this treatment consciousness is restored, delirium calmed, and restlessness and pain relieved.

The Credé or mercurial ointment has been of no special benefit in these cases, according to this writer. In chronic hydrocephalus, potassium iodid internally and in small doses along with lumbar puncture prolong the life of the patient. The iodids are supposed to cause the absorption of the plastic exudate.

Medicolegal

When a Disability Is Immediate.—The Supreme Court of Kansas holds, in Order of United Commercial Travelers of America vs. Barnes, that, as applied to a contract indemnifying a person, in case of accident, for injury sustained by violent means which should, "independently of all other causes, immediately, wholly, and continuously prevent him from the prosecution of any and every kind of business pertaining to his occupation," the word "immediately" is not synonymous with "instantly," "at once," and "without delay." A disability is immediate, within the meaning of such contracts, when it follows directly from an accidental hurt, within such time as the processes of nature consume in bringing the person affected to a state of total incapacity to prosecute every kind of business pertaining to his occupation.

Value of Services Determined by Locality.—The Supreme Court of Rhode Island says, in the case of Best vs. McAuslan, brought by a specialist on the eye, ear and throat to recover for performing the "radical mastoid" operation, that the plaintiff and his two expert witnesses declared that, for performing the operation under the circumstances of this case, the sum of $500 charged was not excessive, while the defendant introduced as a witness a specialist in the same line, who had had a large experience with this class of operations, who testified, and was not contradicted, that the price for this operation in Providence would range from $200 to $300, although higher in other and larger cities. Continuing, the court says that the rule has been laid down, in several cases cited by the defendant, that "the value to be proved is the ordinary and reasonable price for services of that nature"—Styles vs. Tyler, 64 Conn., 432, 463; Ladd vs. Witte (Wis.), 92 N. W. Rep., 365, 367—and that, to prove the real value of services in question, customary charges of physicians for like services in the same locality may be shown—Jonas vs. King, 81 Ala., 285; see, also, Pfeil vs. Kemper, 3 Wis., 315—where the same rule is applied as to services not medical. In the court's opinion, this was the true rule to be applied in this case; and it followed, it says, that, as a sum of not to exceed $300 appeared to be the customary charge for this operation in this locality, that sum was all that the plaintiff should be entitled to recover for the operation alone, in the absence of an

express contract for a larger sum. As to charges of $5 per visit at the house and $3 per visit at the office, all the medical witnesses on both sides testified that those were the ordinary and customary charges for a specialist in this locality, and that the services of the specialist in this case were necessary and proper, so the sum of $404 claimed for such visits was allowed.

Waiver of Privilege by Stipulation in Contract.—The Supreme Court of Nebraska holds, Western Travelers' Accident Association vs. Munson, that the prohibitions, in Section 333 of the Code of that state, against a physician's testifying to confidential disclosures made to him in the course of his professional employment, are for the benefit of the patient, who, by express provisions of Section 334, is permitted to waive them. It is not necessary that such waiver be made at the time of the trial. It may be included in and made a part of the contract sought to be enforced in the action in which such testimony is offered. A stipulation in a contract of life insurance to the effect that the proofs of death shall consist in part of the affidavit of the attending physician, which shall state the cause of death and such other information as may be required by the insurer, constitutes a waiver within the meaning of said sections, and renders the attending physician a competent witness as to the confidential disclosures made to him by the assured concerning his last sickness. It is further said in the case that it has been held that the patient may waive the protection of the statute, even though there is no provision for such waiver. Carrington vs. City of St. Louis, 89 Mo., 208; Grand Rapids Railway Co. vs. Martin, 41 Mich., 667. The proper treatment of a patient often involves an intimate knowledge on the part of his physician of facts of a delicate nature, and which the patient would object to having disclosed to third persons. The common law protects the patient against the voluntary disclosure of such facts, and the statute protects him against their involuntary disclosure by his physician. But where the patient himself not only consents, but expressly stipulates, that such disclosures be made in order to give force and effect to his contract, it would be a harsh and unwarranted application of a salutary rule to hold that the plaintiff (the beneficiary of his contract of insurance) could not avail herself of such stipulation for the enforcement of the contract made for her benefit.

No Promise on Part of Company to Pay for Services.—The Court of Errors and Appeals of New Jersey says, in the case of J. H. Mohlman Co. vs. American Grocery Co., that a boy who had been in the employ of the grocery company had been kicked by one of its horses while engaged at work at its stable, and received a severe injury to his jaw. Another employe of the company took him immediately to a physician's office for treatment, telling the physician, on being asked who was responsible for his bill, that the grocery company would be good for it. During the course of the treatment, which extended over a period of more than two months, it became necessary, in the judgment of the physician, to have an interdental plate made for the boy. This work, the physician told another employe of the company who was in the habit of accompanying the boy to his office, would require the services of an expert dentist, asking such other employe who would pay the dentist's bill; and the employe referred him to the grocery company's cashier. The cashier, in turn, applied to the company's manager for instructions, and was told to refer the physician to the Fidelity and Casualty Company, a corporation which had insured the grocery company against liability for accident to its employes. The physician then called up the casualty company on the telephone, and was informed by the agent who answered his call not to go ahead with the case until that company had looked into the matter, and that if he sent the boy to the dentist and incurred any bill he would have to pay it out of his own pocket. No other communications were had by the physician with the employes or agents of the grocery company relating to compensation for his services, so far as was shown. It was not contended that the statement made by the employe who first took the boy to the physician, that the grocery company would be good for the physician's bill, imposed any liability on that corporation. Nor does the court think that liability on that company's part to pay the physician's bill could be deduced from the failure of its manager to repudiate liability on its part and his referring the physician to the casualty company. It says that the question of the company's liability was one which the manager was not concerned with. He knew that if it existed the company was protected against loss by reason thereof through its contract with the casualty company. He properly concluded, therefore, that, as the casualty company was ultimately liable, if liability existed at all, for the expenses incurred on account of the boy's injuries, that company, and not the grocery company, was the one to determine whether or not the proposed expenditure should be made. His reference of the physician to the casualty company was tantamount to saying: "We have no responsibility in the matter. If the boy has any claim, the casualty company must pay it. They, therefore, and not the American Grocery Company, are the ones by whom the question of incurring this proposed expense must be passed on." Instead of being an affirmation of the grocery company's liability, and a notification to the physician that he was contracting an obligation against that company by treating the boy for his injuries, it was rather a notification that the physician must look to the casualty company, and not to the grocery company, for compensation for his services.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical News, New York.

July 1.

1 National Association for the Study and Prevention of Tuberculosis. President's Address. E. L. Trudeau, Saranac Lake, N. Y.
2 Educational Treatment of "Tics." B. Sachs, New York.
3 *Lavage of the Renal Pelves in the Treatment of Bright's Disease. W. Ayres, New York.
4 Fetal Manifestations of the Toxemia of Pregnancy. W. S. Stone, New York.
5 *What Advice Should be Given to Women with Malpositions of the Uterus? C. G. Child, Jr., New York.
6 Carbolic Acid Gangrene. J. Herold, New York.
7 The Medical Profession in Its Relation to the Elimination of Communicable Diseases. E. N. Lieli, Jacksonville, Fla.

3. **Lavage of Renal Pelvis in Bright's Disease.**—Ayres believes that not enough importance has been given to the probability that a large per cent. of cases of chronic nephritis, in which no discoverable cause for the inflammation can be found, are really due to extension of inflammation from the renal pelvis. He has treated a number of cases of nephritis in all of its various stages by lavage of the renal pelves, and the purpose of his paper is to present the results of such treatment. In speaking of these cases, he refers to beginning nephritis as parenchymatous degeneration. Pronounced cases are called parenchymatous or interstitial nephritis, according to the portion of kidney involved. He has treated 46 cases of parenchymatous degeneration, and in all but 8 the tubal cells and albumin have disappeared from the urine. Six of these 8 are still under treatment. Among these there were 46 patients who had casts, both granular and hyalin. Every one of these has been discharged, cured. There has been no indication of a recurrence of the trouble. Of the other 38 patients, all presented tubular epithelium; 16 had no albumin, and 22 showed more than a trace. The longest time required to cause the albumin to disappear in the mild cases was 11 weeks; the shortest, one treatment. Nearly all of the 38 patients remained under treatment for other troubles some months, during which time there was no evidence of a return of the kidney trouble. Of the 12 cases of advanced nephritis, 3 patients with chronic parenchymatous variety were markedly improved. Two patients with mild interstitial nephritis were somewhat improved. One patient with marked interstitial nephritis was considerably improved at first, but the treatment had no ultimate influence on the course of the disease. Three patients with well-marked interstitial nephritis

were not influenced; neither were 2 who had had decapsulation performed. One patient in the late stages of interstitial nephritis was made much worse by the treatment. Hence, lavage of the renal pelves is applicable only in selected cases. In subchronic and chronic parenchymatous nephritis, lavage will check the disease and markedly improve the general condition of the patient, in those cases that have not reached the stage known as cirrhotic kidney. It will certainly cure a beginning nephritis that is due to extension of inflammation from the renal pelves. Lavage of the renal pelves requires the utmost delicacy in handling the instruments, and the injections through the ureteral catheters must be made with patience and gentleness. Asepsis must be rigorously observed not only in regard to the cystoscope and catheters, but the hands of the operator and the urethra of the patient must also receive attention. The least roughness in the use of the cystoscope may cause injury to the urethra and to the vesical trigone. Lack of delicacy in the passage of the ureteral catheters may cause hemorrhage from the ureters. The use of too strong or too irritating solutions may cause severe renal colic; and an injection which is too copious or which is given with too much force causes considerable pain and will not benefit the patient. Ayres considers the straight view cystoscope preferable to the angular view in that it causes the patient much less pain; there is less danger of injury to the ureter; the character of any obstruction in the ureter may be more easily determined; and the entire operation of catheterization of the ureters is much more quickly completed with this form of instrument. The medication must be selected to suit each case. Ayres favors silver nitrate in a vehicle of boric acid, 1-8000, increasing slowly to 1-2000. The time occupied in giving a lavage varies with different patients. Those who have a tolerance for solutions in the renal pelves require about fifteen minutes, while patients with irritable or sensitive ureters require half an hour. In the former cases, the solution is thrown in slowly until there is a feeling of fullness over the kidneys; in the latter only about a dram should be thrown in at a time. In all from two to four ounces a temperature above that of the body—105 to 110 F. seems to be best borne by the patients. If colicy pains occur, it is best to remove the catheters immediately and to postpone further lavage for one week. A proper lavage of the renal pelves consists of repeated injections of small quantities of a medicated solution through a catheter that has been passed well up the ureters toward the pelves. It is not necessary that the eye of the catheter be in the pelvis, but it should be within six inches of it. After each injection, the fluid is allowed to flow out through the catheter before a second injection is given. Never inject large quantities. As the catheter is withdrawn, the solution is deposited all along the ureter so as to treat that organ. The patient is then requested to pass the water remaining in the bladder; a Janet wash of silver nitrate is given, and the operation is completed.

5. **Advice to Patients with Uterine Displacements.**—Child divides all malpositions of the uterus into three classes: Operative, non-operative, and questionable. The operative class is further divided into those requiring immediate attention, and those in which it is safe to wait for a reasonable time the convenience of the patient. Under the first subdivision, come those cases which may be classed as emergency ones, namely, inversion, incarceration and irreducible prolapse of the gravid uterus, and adherent gravid retrodisplacements with symptoms of threatened abortion. In the second subdivision are the complicated retrodisplacements and herniæ of the uterus either through the vagina or through the abdominal wall. In the non-operative class Child includes uncomplicated retrodisplacements and reducible hernia of the gravid uterus. The questionable class embraces the congenital type of cases and retrodisplacements with symptoms relieved by reduction, except when the use of a proper pessary fails to accomplish an anatomic cure, or in young virgins in whom its use is unjustifiable. The congenital cases being errors in development are each a law unto themselves and require a most thorough investigation. When the retrodisplacement is the only abnormality present, the patient is often greatly benefited by an early operation, but when other marked evidences of maldevelopment exist the prognosis is unfavorable.

American Medicine, Philadelphia.

July 1.

8 *Rectal Alimentation. W. H. Porter, New York City.
9 *Two Cases of Korsakoff's Psychosis; with Neuropathologic Findings in One of the Cases. R. V. Patterson, and D. J. McCarthy, Philadelphia.
10 *Primary Cancer of the Liver with Metastases to the Left Adrenal and Right Lung. W. F. Cheney, San Francisco, Cal.
11 Some Phases of Tropic Malarial Disease. T. W. Jackson, Philadelphia.
12 *Surgical Aids in the Treatment of Paralyzed Muscles and Their Deformities. S. D. Hopkins, Denver, Colo.
13 *Rheumatic Purpura in Children. J. J. Manasses, Philadelphia.

8. **Rectal Alimentation.**—Porter calls attention to the fact that, owing to the limited amount of food that can be utilized in this manner, it is at best a very poor substitute for the natural method of feeding. It does, in a measure, relieve the pangs of thirst and hunger that of necessity follow the slow process of starvation which occurs when the stomach and small intestines are thrown out of commission, but, so far as Porter's experience has gone, rectal alimentation has proved most unsatisfactory. He has tried all forms of substances, predigested and otherwise, for rectal alimentation, with but one result, namely, progressive starvation without the most intensely distressing symptoms.

9. **Korsakoff's Psychosis.**—Paterson reports two cases which he regards as typical of the disease. Both cases reported were sudden in onset, of alcoholic origin, and each patient exhibited the symptoms of ordinary, severe multiple neuritis with marked weakness and inability to walk, disorientation as to time and place, marked fabrications, illusions of identity, hallucinations of sight and hearing, and defective memory, with a certain peevishness and childishness of manner. After two months, the mental symptoms in one patient had improved sufficiently to show little more than a feeble memory for recent events, and at the end of four months such improvement in the physical condition as gave promise of a more or less complete recovery from the multiple neuritis. The second patient died of cardiac exhaustion at the end of one month. Neuropathologic findings showed no gross change in the brain or spinal cord. Microscopic examination revealed marked degenerative changes in the anterior horn cells of the cord and throughout the peripheral nerves and muscles, pyknosis in some of the cells of the pyramidal layer taken from the Rolandic area, diffuse moderate chromatolysis of the large Betz cells in the brain and a complete diffuse chromatolysis of the anterior horn cells in the cord. No changes were found in the subendymal tissues, neuroglia, blood vessels, meninges or by sheath stains in the spinal cord, medulla or brain.

10. **Primary Cancer of the Liver.**—Cheney cites a case occurring in a man of 65, whose symptoms were pain in the left side for fifteen years past; pain in the right side and tumor in the same region for two years past; loss in weight and persistent vomiting. He had a large palpable tumor below the right costal margin continuous with the liver above; a nodule in the epigastrium the size of a walnut; and a large, indefinite, deeply-seated mass on the left side, beneath the costal margin. The blood count gave evidence of a secondary anemia. There was no disease of the kidneys, lungs or heart. The diagnosis made was cancer of the pyloric end of the stomach and a gastroenterostomy was done for its relief. The patient died the same day from shock. At the autopsy it was found that the tumor in the right side was a large cancerous mass in the right lobe of the liver; the nodule in the epigastrium was situated in the left lobe of the liver; and the mass in the left side was found to be a tumor of the left adrenal, the size of an infant's head. The stomach and intestines were entirely free from invasion. The tumor was considered primary in the liver, because the structure of the metastases in adrenal and lung resembled that of liver tissue; and also because bile pigment was found in the adrenal tumor.

12. **Surgical Aids in Treatment of Paralyzed Muscles.**—Hop-

kins says that when mechanical means have failed to restore paralyzed muscles to usefulness, such surgical procedures as tendon transplantation or arthrodesis should be employed. Certain precautions should be observed in tendon transplantation: 1. Careful selection of cases. 2. Before muscle grafting is performed, the electric reactions should be taken to determine the strength of the muscles to be transplanted. 3. The reinforcing tendon should be as nearly parallel as possible to the one to be reinforced, and it should belong to the same muscle group, although this latter precaution is not absolutely necessary. 4. Overextension at the time of suture should be avoided, as subsequently the muscle will lose its contractile power. 5. The tension of reinforcing muscle should be estimated by pulling on it until it shows signs of complete resistance. 6. Silk sutures should be used and the muscles quilted together firmly. 7. Strict asepsis should be observed during the operation.

13. **Rheumatic Purpura in Children.**—Manasses reports three cases. The first, that of a child of 3, was of rheumatic diathesis. The attack was ushered in with headache, sore throat, nausea, but no vomiting. Temperature ranged between 102 and 104 F. On the third day, the eruption appeared on the lower limbs and rapidly spread over the entire body. Some blebs became necrotic. On the sixth day, the child could not distinguish objects placed in front of its eyes. There was a trace of albumin in the urine; there was no blood from the mucous membrane of bowels. Recovery was slow. Fully four weeks elapsed before the purpura disappeared. The other two cases, in children aged 8 and 9 years, respectively, were mild and followed a course similar to the first, but the symptoms were less severe.

Medical Record, New York.

July 1.

14 *Correction of Nasal Deformities by Subcutaneous Operations. J. O. Roe, Rochester, N. Y.
15 *Actinomycosis of the Lung. E. F. Ingals, Chicago.
16 *Poisoning by Wood Alcohol. A Case of Complete Blindness (Transitory), With Recovery of Vision. C. Koller, New York.
17 *Aspects of the Cancer Problem. G. B. Massey, Philadelphia.
18 *Treatment of Spastic Constipation. A. Albu, Berlin, Germany.
19 *Inebriate Manias; A Medicolegal Study. T. D. Crothers, Hartford, Conn.
20 Advanced Scholarships and Morbid Mental Conditions; Some Clinical Cases. W. L. Howard, Baltimore, Md.

14. **Correction of Nasal Deformities by Subcutaneous Operations.**—Roe describes the operative technic employed in correcting seven cases of extreme or unusual deformity of the nose, due to disease or accidents of various sorts. The underlying principle of Roe's methods consists in doing as much of the work as possible subcutaneously, so as to avoid scarring of the skin, and he has been able to develop this plan to a remarkable degree. The "before and after" appearance of the patients is illustrated by a series of twenty-one photographs. Roe points out the importance to the individual of having such deformities corrected, and his results show that by the exercise of sufficient ingenuity and the most careful attention to detail it is possible to relieve patients of a disfigurement which forms a source of embarrassment to them, often amounting to positive torture.

15. **Actinomycosis of the Lung.**—Ingals describes a case in which the etiology is obscure, as the patient had not come into contact with diseased cattle. On incising a swelling in the right interscapular space, a quantity of grayish pus escaped, which on examination was found to contain actinomycosis fungi. The general symptoms were indefinite, as well as the pulmonary signs in the region of the abscess. The author says that the disease in its earlier stages may be divided into pleuropneumonic or bronchopneumonic varieties, while later on the lesions are so complex that it is often impossible to classify them. In pleuropneumonic actinomycosis the invasion occurs from without, but sooner or later the two forms run into each other, the pleuropneumonic extending inward, until the bronchi are involved or the bronchopneumonic progressing until the pleura is affected. Ingals' case was of the pleuropneumonic type, and the question arises whether the infection could have occurred through some forgotten scratch or pimple, or through the unbroken skin. The disease is likely to be mistaken for pulmonary tuberculosis, gangrene, malignant disease, syphilis, and hydatid cysts. The differential diagnosis and prognosis are discussed, and treatment with iodid of potassium in large doses combined with general tonic measures is said to offer the best chances of cure, though there is but little hope when secondary infection with pus cocci occurs.

16. **Poisoning by Wood Alcohol.**—Koller describes the case of a man of 42, suffering from acute, total blindness. The loss of sight had come on during the second night after taking about two ounces of whisky, a quantity which subsequent analysis showed contained about 20 c.c. of wood alcohol. The visual disturbance rapidly progressed, until about thirty-six hours later he was completely blind. On ophthalmoscopic examination, the optic nerves presented the picture of a neuroretinitis of moderate intensity and in the macular regions were dispersed numerous, yellowish, bright, shining spots similar to the picture described as choroiditis guttata. Potassium iodid, hot baths and good nourishment were prescribed, and six months later the right eye showed complete recovery of function, except a moderate diminution of visual acuity, and the left eye presented marked though moderate concentric contraction of the field, considerable diminution of central vision and absence of perception for green.

17. **Some Aspects of the Cancer Problem.**—Massey urges a wider diffusion among the public of our present knowledge concerning the disease. The public should be instructed as to the deplorable results of delay, whereby what was at first a strictly local process is permitted to become generally diffused. It is urgently to be desired that the government and wealthy private individuals should subsidize research laboratories devoted to the study of this question, as the private means of investigators are usually inadequate. In regard to treatment, Massey says that nearly 100 per cent. of external and semi-external growths can be positively cured in their early stage by cauterization, particularly by the electrochemical methods of destructive sterilization.

18. **Treatment of Spastic Constipation.**—Albu says that it has of late years been recognized that there is a type of the disease in which the gut is in a state of spastic contraction. At least 25 per cent. of the cases of constipation in women belong to this variety. Treatment of constipation due to spasm is naturally very different from that of constipation dependent on atony, but the diagnosis is often difficult or impossible. The patients are usually neurasthenic or hysterical individuals, who may exhibit spasm in other regions of the body, such as cardio spasm, pharyngeal spasm, etc. The intestinal spasm is not continuous and gives rise to sensations that may range merely from a feeling of discomfort to positive colics. The contracted knots of the intestine may be palpable as tender sausage-shaped masses, and rectal examination may reveal a spastic condition of the sphincters. The feces sometimes assume the characteristic ribbon or lead-pencil shape. The treatment comprises the avoidance of all irritation of the intestine, especially massage, and the use of soothing and relaxing measures, such as warm baths, hot applications to the abdomen, warm oil enemas, belladonna, nonirritating, gruel-like diet, and rectal bougies.

19. **Inebriate Manias.**—Crothers cites numerous instances in which men who had for years been moderate drinkers developed delusions of various sorts which prompted them to commit or to attempt murder, suicide, and other crimes.

Boston Medical and Surgical Journal.

June 29.

21 *Frequency, Prognosis and Treatment of Lobar Pneumonia in Infants and Children. H. Koplik, New York.
22 Acetonuria in Non-Diabetic Surgical Cases. J. C. Hubbard, Boston.
23 Toxic Degeneration of the Lower Neurons. J. E. Donley, Providence, R. I.

21. **Lobar Pneumonia in Infants and Children.**—Koplik says that the pneumonia of infancy and childhood as compared to that of the adult presents certain differences in its course which should impress the physician. In certain epidemics,

meningeal symptoms seem to predominate, especially in those cases in which the apices of either lung are involved. In other epidemics, pneumonia with meningeal symptoms is not so frequent. In children, pneumonia is more apt to be followed by purulent pleurisy, especially below the age of 4 years, than by pleurisy with effusion, as in the adult. During fifteen years he saw 839 cases of pneumonia of all kinds and types. Of these cases 582, or 69 per cent., occurred before the end of the first two years of life. Of the 839 cases mentioned 436 occurred in male and 403 in female children. The right lung is mostly affected, and the upper lobe of the right lung rather than the lower lobe of the left lung is mostly involved. The prognosis of lobar pneumonia in infants and children will vary as to the age, severity and kind of infection, as to the amount of lung involved, and the presence or absence of complications. Generally speaking, the prognosis as to age is best below 10 years. The younger the child, the greater the danger. The season of the year also influences mortality. In the winter months, when the epidemic is at its height, the mortality is greatest, and in the spring and summer months it is lowest. This is due, possibly, to the great virulence of the infection. Complications also influence the prognosis. In infants and children a complicating pericarditis is fatal. Other complications, such as otitis, pleurisy, empyema, do not materially influence the prognosis in infants and children if recognized early and treated on sound principles. Lobar pneumonia, being an acute infectious disease, absolutely self-limited in its course, uninfluenced by any mode of specific treatment that we know of, it should be the duty of the physician to manage a case of lobar pneumonia in an infant or child very much on the same principles as he would manage a case of any other infectious disease, such as typhoid fever, with a certain allowance for the duration of the disease and the severity of the infection.

New York Medical Journal.

July 1.

24 Varicella Gangrenosa, with Report of a Case. F. Kieffer, Fort D. A. Russell, Wyo.
25 *Improved Method of Making Fresh Blood Mounts. G. R. Plummer, Key West, Fla.
26 Primary Jugular Bulb Thrombosis in Children, as a Complication of Acute Purulent Otitis Media; Report of Cases. F. McKernon, New York.
27 Six Lectures on Diseases of the Blood. J. M. Swan, Philadelphia. I. Technic.
28 Scientific Spirit versus Commercialism in Medicine. W. L. Conklin, Rochester, N. Y.
29 Etiology of Bradycardia. J. E. Greiwe, Cincinnati.
30 How Far Shall We Go in Performing Multiple Operations at One Sitting? H. A. Royster, Raleigh, N. C.
31 Fibroma of the Sheath of a Tendon. F. Torek, New York.

25. **Improved Method of Making Fresh Blood Mounts.**—Plummer's method is the same as that proposed by Hayem, except that he does not make use of the forceps. He accomplishes the same result by holding the cover-slips together with a dab of hot sealing wax.

St. Louis Medical Review.

June 24.

32 *Clinical Studies at Mount St. Rose. W. Porter, St. Louis.
33 Rupture of the Gall Bladder (Spontaneous and Traumatic; with and Without Operation)—An Historical Review of 273 cases. B. M. Ricketts, Cincinnati.

32. **Clinical Studies of Tuberculosis.**—Porter offers the following practical deductions made at the bedside based on the study of a large number of cases: 1. The progress and extent of the local lesions do not go, *pari passu*, with the general condition in pulmonary tuberculosis. 2. Posterior lesions are most aggressive. 3. The number of bacilli is not indicative of the stage of the disease or of its progress. 4. Hemorrhage is not always harmful. 5. Autoinfection is an indication for the use of salt solution. 6. Large doses of creosote are not indicated. 7. Night sweats may be controlled by giving an ounce of whisky just before the time of their occurrence, which, of course, must be determined beforehand. 8. Heart tonics, given in the early stages with increased lung expansion, encourage the pulmonary circulation. 9. Alterative expectorants are of value in the first and second stages. Other points discussed by Porter are the mechanical treatment of hemorrhage; the control of the fever and cough; value of the spinal douche, and the personal equation of the medical attendant.

Lancet-Clinic, Cincinnati.

July 1.

35 The University an Important Factor in the Community. E. G. Zinke, Cincinnati.
36 Clinical Value of Autopsies. F. P. Anzinger, Springfield, Ohio.
37 Treatment of Ophthalmia Neonatorum. C. T. Souther, Cincinnati.
38 Cholecystitis. J. L. Wiggins, East St. Louis, Ill.

Annals of Surgery, Philadelphia.

May.

39 *Actinomycosis. A. D. Bevan, Chicago.
40 *Cerebral Tumor. J. E. Owens, Chicago.
41 *Retrosternal Accessory Thyroid Tumor. H. D. Collins, New York.
42 Transthoracic Resection of the Lower End of the Esophagus. W. Meyer, New York.
43 *Gastroenterostomy and Pyloroplasty. W. B. Cannon and J. B. Blake, Boston.
44 *Resection of the Middle Third of the Stomach for Carcinoma of the Greater Curvature, C. L. Scudder, Boston.
45 Surgical Considerations Pertaining to Gastric Dilatation. A. M. Pond, Webster City, Iowa.
46 Gunshot Wound of the Pancreas. F. C. Connell, Salida, Colo.
47 *Hydrocele in the Female. A. E. Halstead and C. P. Clark, Chicago.
48 *Tuberculosis of the Testicle. I. S. Haynes, New York.
49 Rupture of the Tendon of the Biceps Flexor Cubiti. W. W. Keen, Philadelphia.

39. See abstract in THE JOURNAL, Jan. 28, 1905, page 317.

40. **Cerebral Tumor.**—Owens describes a case of cerebral tumor—in the right parietal region—occurring in a woman, aged 30, which was removed in two stages by the osteoplastic method, with subsequent wiring of the bone flap and the introduction of a gold plate. A notable feature during the operation was the profuse hemorrhage from the scalp. In spite of the fact that the head was encircled with an elastic band, hemorrhage persisted until the scalp at the pedicle of the flap was loosened for the purpose of enclosing the pedicle in an elastic ligature. As there was no tendency toward bone union in the skull, and as it was impossible to prevent the reappearance of a hernia cerebri, which first appeared a few days after the operation, the following final operation was performed: Drilling the skull and inserting a 22-carat, thin gold plate beneath the edges of the bone and over the cerebral protrusion. A silver wire was introduced, the flap was pressed into as close apposition as possible, and the wire twisted. The edges of the scalp wound were freshened with scissors, the scalp sutured, and a dry dressing with gauze drain applied. Three months after the operation the patient felt quite well, her appetite was good and she slept well. Otherwise her condition was the same as before operation, except that she was not troubled with headaches or vomiting. The wound had healed nicely, and no portion of the gold plate was visible.

41. **Retrosternal Accessory Thyroid Tumor.**—A case of this kind requiring removal and terminating fatally is cited by Collins. The patient, a woman, aged 47, had a globular cystic tumor about one inch in diameter to the right, but close to the median line of the neck, overlying the thyroid cartilage. The tumor had been present for nineteen years, and in the last two or three years increased considerably in size. Lately there had also been some difficulty in breathing, but no difficulty in swallowing. Under general anesthesia, the cyst was pealed out of the gland tissue. Instead of finding a simple spherical mass, the globular head of the cyst had a tail or backward prolongation about a half inch in diameter, extending along the right side of the trachea and esophagus. Two small cysts were shelled out from the left lobe of the gland. A sinus persisted, discharging freely. Fifteen months after the operation, the sinus was dissected out and was found to terminate in a cavity lying on the vertebral column at about the level of the sternal notch. Below, and apparently a continuation of the termination of the sinus, lay a discrete mass, three inches long and measuring about an inch and a half transversely and also antero-posteriorly. This mass lay just to the left of the median line, terminating below behind the arch of the aorta. The mass was shelled out and was found to be pure thyroid tissue with many colloid cysts and numerous calcareous deposits. On the fourth day, a lobar pneumonia developed in the right middle lobe, finally involving the entire right lung, and eight days after the operation the patient died.

43. **Gastroenterostomy and Pyloroplasty.**—Cannon and Blake present the results of an experimental study by means of the Roentgen rays of gastroenterostomy and pyloroplasty as surgical methods of obviating non-malignant pyloric stenosis. This discussion is brought forward from clinical sources, from recent physiologic investigation, and from observations on animals on which the operations mentioned had been performed. The stomach is not a passive bag. During digestion the cardiac end slowly contracts, pressing its contents into the pyloric end. Over the pyloric end, during digestion, peristaltic waves are continually running, churning the food with the gastric juices and forcing the chyme into the intestine. Observations on the functionating human stomach show that as it empties it shortens, especially along the greater curvature. Therefore, the part of the stomach lowest when the organ is full or relaxed is not lowest as it empties. The pylorus then becomes the lowest point. Even if "gravity drainage" occurred, the pylorus is the natural outlet, so long as the stomach retains its power of contracting. After an ordinary meal, the peristalsis of the pyloric end of the stomach makes the contents of this part more fluid than the contents of the cardiac end. Because peristaltic waves move toward the pylorus, the intragastric pressure is three or four times greater at any pylorus than in the cardiac end. Observations on large cats with gastroenterostomy openings of various sizes at various parts of the stomach showed that unless the opening, or stoma, was in the antrum (i. e., close to the pylorus) the food, even when fluid, was pushed through the pylorus rather than through the stoma. With peristalsis only in the pyloric end of the stomach, with the intragastric pressure much greater at the pylorus than elsewhere in the stomach, and with the food in the pyloric end normally more fluid than that in the cardiac end, the food is forced into the intestine through the pylorus and not through the artificial opening, when both ways are offered. Circulation of the food through the pylorus to the duodenum and back to the stomach through the anastomosis has been repeatedly observed, but it was not followed by the clinical symptoms of the "vicious circle." The circulation was observed best when the stomach was very full. The stretching of the stomach separates the lips of the stoma and draws the intestinal wall into line with the gastric wall. The openings into the intestine at the stoma then become mere slits, and act like waves, permitting the entrance, but preventing the exit, of the food. The clinical symptoms of the "vicious circle" have been observed in animals in which a kink of the intestine has been found just distal to the anastomosis. Kinks at this point can not be straightened by peristaltic activity because the circular fibers of the intestine are cut at the nearby stoma. It is important that food be mixed with the secretions poured into the duodenum; these juices are highly effective in digestion, and also neutralize the acid chyme. If food leaves the stomch by the stoma, it is not mixed with these secretions. Jejunal ulcers after gastroenterostomy may be due to the presence of acid in a region in which the inorganic acid is not normally found. From the above considerations, it was concluded that the stoma should be large and as near to the pylorus as possible; that the circulation of the food be rendered less probable by avoidance of overeating, and that, so far as possible, kinks be obviated by attaching a narrow band of the distal gut to the stomach for several centimeters beyond the stoma, thus permitting peristalsis to become an effective force. The probability of a circulation of the food whenever the pylorus is left open, the non-mixture of the food with the digestive and neutralizing fluids in the duodenum, and the ever-present danger from kinks in gastroenterostomy do not make the operation an ideal one. In pyloroplasty (preferably the Finney operation) these complications are avoided, and a too rapid exit of the food through the pylorus is prevented by rhythmic segmentation of the food in the duodenum, an activity which, in part, replaces the functions of the pylorus, and also mixes the food with the pancreatic juice and the bile.

44. **Carcinoma of the Stomach.**—The case reported by Scudder is of interest because carcinoma of the greater curvature of the stomach is unusual. The growth did not infiltrate the submucosa, as is commonly the case with pyloric carcinoma. It had attained considerable size without causing many symptoms of gastric disturbance, for neither the pyloric nor the cardiac portions of the stomach were invaded. An end-to-end anastomosis was done, using an interrupted Connell suture. The technic of the operation was very greatly facilitated by the employment of clamps, according to the methods of Kocher, Hartman, Mayo and Moynihan. Ten months after the operation, the patient was still enjoying good health. Her age at the time of operation was 37. The diagnosis was confirmed microscopically. The feeding of the patient immediately after operation was as follows: She was fed for about one week on nutrient enemata containing milk, three ounces; one egg; salt solution, one ounce. A nutrient enema was given every eight hours. Each morning a cleansing enema was used thoroughly in the lower bowel. On the fourth day she was allowed water by mouth; on the ninth day, liquids; on the tenth day, soft solids.

47. **Hydrocele in the Female.**—Halstead and Clark report a case of a colored woman, 42 years of age, who, subsequent to the birth of her second child, eighteen years previously, noticed a mass in the right inguinal region, extending from the external abdominal ring into the right labium majus. It was slightly larger than an egg, oblong in shape, and was irreducible. It was tense, elastic, and very tender. A diagnosis of strangulated hernia was made, an operation advised and immediately performed. The tumor was found to be separated from the skin by a tough, adherent fascia. It contained an ounce and a half of a pale, straw-colored fluid. The diagnosis was changed to hydrocele of the canal of Nuck. The sac was freed from the surrounding tissue and from the round ligament, with which it was intimately connected, ligated at its highest point, and removed. Three layers of the abdominal wall were sutured, as in a Bassini operation for inguinal hernia. The round ligament was fastened in the inguinal canal by means of buried sutures. The skin incision was closed by silkworm gut sutures in the usual way.

48. **Tuberculosis of the Testicle.**—From a study of a personal case and other cases reported in the literature, Haynes concludes that the results from epididymectomy are more favorable than the best results obtained from castration, for in twenty epididymectomies there were only two deaths, one probably from tubercular kidney and the other from spinal disease. The much dreaded psychologic state following double castration occurs so very infrequently that this possibility can be disregarded entirely.

The Laryngoscope, St. Louis.

May.

50 Modern Methods of Accessory Sinus Treatment. H. H. Curtis, New York.
51 Antrum of Highmore; Removal of the Greater Part of Its Inner Wall Through the Nostrils for Empyema. O. T. Freer, Chicago.
52 *Proper Position of Patient in Operation for the Removal of Adenoids Under General Anesthesia. C. R. Holmes, Cincinnati.
53 Middle Ear Suppuration and Its Complications H. F. Tod, London.
54 Acute Mastoiditis and the Mastoid Operation in Children. W. A. Wells, Washington.
55 *Mastoid Operation—Indications Therefor in Acute Suppurative Otitis Media Without Mastoid Symptoms. C. Jackson, Pittsburg.
57 Adenoid Curette. St. Clair Thomson, London.
58 Post-Nasal Forceps. St. Clair Thomson, London.

52. **Position of Patient in Removing Adenoids Under General Anesthesia.**—For the past fourteen years Holmes has proceeded as follows: The foot of the operating table is elevated slightly above the level of the head. The child, after thorough preparation, is anesthetized in the recumbent position. The scalp is done up firmly in a towel wrung out of antiseptic solution. When complete anesthesia is obtained, the chloroform mask is removed and the mouth gag (Holmes) introduced, and, while the child is still lying on its back, the hypertrophied faucial tonsils, if present, are liberated by a blunt dissector from any adhesions which may bind them to the faucial pillars. The child is then quickly turned on its left side, the left arm and shoulder are drawn back so that

the former lies on the table behind the child, the right arm is grasped near the shoulder joint by an assistant on the opposite side of the table, who lifts that half of the shoulder girdle away from the chest so as to secure ample breathing space and at the same time to steady the child. The mouth gag is reintroduced into the right side of the mouth by the principal assistant, who manages the gag and slightly extends and steadies the head, the face is brought even with the left edge of the table or even slightly over the edge, and the operator, equipped with an electric forehead mirror and seated on a stool of medium height on the left side of the table, removes the adenoid hypertrophy quickly and thoroughly with the Gottstein curette, or some modification of that instrument, and subsequently examines the nasopharynx with the index finger of the left hand and removes with curved scissors and forceps any shreds or tags of the growth, or of the pharyngeal mucous membrane that may have been stripped up, as may rarely occur. The faucial tonsils are then removed, if necessary, with the cold snare or, if soft and ragged, with the curette, the adenectomy having been thoroughly done so quickly as to allow an ample emergence from under the influence of the anesthetic. As soon as the hemorrhage ceases, the patient is rolled over into the supine position, the left cheek cleaned from the few flecks of blood that are on it, the towel removed from the head, and he is carried to his bed from which he is released the next day, to remain in his room in the hospital for three or four days. At the end of this time, all danger from a possible secondary hemorrhage is over and a healthy granulating surface has covered the wound and can resist to the utmost any accidental infection that might be encountered in the street or in the home. By this method of performing the operation, it will be observed that the position of the patient adds nothing to the ordinary dangers of the anesthetic, the force of gravitation does not add to the burden of the heart, the neck is straight, the respiration is not embarrassed by "embracing" the chest or "fixing" the arms, or by the pharynx filling with blood which is likely to find its way into the windpipe. That the position of the head is such that all the hemorrhage finds its way out of the nose or, when that becomes blocked by soft clots, out of the mouth, the inner surface of the left cheek forming the floor over which it travels to the left angle of the mouth. In this way, the field of operation is kept so clear that the operator can at all times see the posterior pharyngeal wall or can easily clear it with a wad of cotton on a sponge holder and can detect and remove any shreds that tend to make the operation imperfect, and the amount of blood lost can be accurately appreciated as it drops into a white stone receiver on the floor between the feet of the operator and none can find its way into the stomach to deceive the surgeon as to the volume of the hemorrhage and to annoy the patient after recovery from the anesthetic by producing emesis and possibly a secondary hemorrhage excited by the latter.

55. **Mastoid Operation.**—Jackson maintains that the opening of the mastoid is justifiable in acute purulent otitis media, in the absence of symptoms of mastoid envolvement, under one or more of the following conditions: When the discharge shows no sign of abatement after having persisted for a period of eight weeks, more or less, as judgment in the individual case may dictate; usually less in streptococcal infections; when there are occasionally, slight temperature rises, irritability of temper, malaise, fetid breath, etc., otherwise unaccounted for; when the social position of the patient makes it certain that the ear lesion will become chronic from neglect; in violent suppurations which threaten the hearing, if not the life, to delay is dangerous; when dependence on drainage through the canal becomes hazardous for any reason, such as swelling of the canal; when patients are going into remote districts or on a sea voyage, to allow them to run the risks of defective drainage is unwise; when cerebral or labyrinthine symptoms, such as headache, nausea, vomiting, vertigo, etc., are present, even though drainage seems ample, for the risk of delay here is great. If not due to actual pyogenic extensions, posterior drainage will promptly terminate the danger. In closing, Jackson offers the following propositions:

1. If an acute suppurative otitis media be operated on before inflammatory processes have worked lasting pathologic changes in the ear, we can in practically every case cure the patient—that is, stop the discharge, restore hearing, cure or prevent tinnitus. After inflammatory exudates have worked permanent changes, no surgeon on earth can restore hearing, or cure tinnitus. Cure the discharge, he probably can in almost every case. How? By doing a radical operation. Then why not do a simple mastoid in the first place?
2. To look over the text books and the periodical literature, one would suppose that the only pyogenic extension of purulent otitis media is by way of the mastoid cells. Yet, we all see occasional cases of intracranial extension through the tympanic roof. Are we then justified in considering mastoid empyema the only indication for opening the mastoid? May we not say that it is at times demanded solely for posterior drainage to prevent intracranial pyogenic extension?
3. The risks of operation are practically nil. The risks of postponement are great. To operate after an acute pyogenic invasion has infected the arachnoid, pia, and fluids is a forlorn hope.
4. May we not also say that opening the mastoid for posterior drainage and cure of acute suppurative otitis is justifiable to prevent loss of hearing, to prevent the patient drifting into a chronic suppurative otitis media, with its years of dread and misery, its pernicious anemia, leucocytosis, tinnitus, deafness, facial palsy, brain abscess, meningitis?

Physician and Surgeon, Ann Arbor.

May.

59 Differential Diagnosis and Treatment of Pott's Diseaes. J. Ridlon, Chicago.
60 Pathologic Fatigue and Its Treatment. I. H. Neff, Pontiac, Mich.

Texas Medical News, Austin.

May.

61 Outside View and Criticism of Medical Character and Legislation. J. H. Bell, San Antonio, Texas.
62 Death from Chloroform Anesthesia. W. Keiller, Galveston, Texas.

Journal of Medicine and Science, Portland, Maine.

May.

63 Paralysis in Children. N. J. Gehring, Portland.
64 Treatment of Nervous Insomnia. G. Meier, New York.

The Ophthalmic Record, Chicago.

May.

65 Injuries from Bursting of Locomotive Water and Oil Gauges. C. D. Conkey, Superior, Wis.
66 Interstitial Keratitis. J. W. Hildrup, Philadelphia.
67 Parinaud's Conjunctivitis. O. A. Griffin, Ann Arbor.
68 Papilloma of the Conjunctiva. R. H. Johnston, Baltimore.
69 Case Simulating Toxic Amblyopia. J. W. Pancoast, Philadelphia.

Colorado Medicine, Denver.

June.

70 What is Doing in America in the Fight Against Consumption. A Zederbaum, Denver.
71 Sources of Infection in Tuberculosis. W. C. Mitchell, Denver.
72 Mixed Infection of Phthisis. G. R. Pogue, Greeley.
73 Fever of Phthisis; Its Etiology, Sequels and Treatment. J. F. McConnell, Colorado Springs.
74 Suggestions to the General Practitioner Regarding the Successful Practice of Medicine. J. F. Kearns, La Junta.

Western Medical Review, Lincoln, Neb.

May.

75 He's Only a Doctor. P. E. Plumb, Gothenburg, Neb.
76 Surgical Enthusiasm; Is It Declining? S. C. Beele, David City, Neb.

Journal of the Association of Military Surgeons of the United States, Carlisle, Pa.

July.

77 Needs and Advantages of an International Congress of Military Surgeons. N. Senn, Chicago.
78 Camp Sanitation. H. A. Arnold, Ardmore, Pa.
79 United States Naval Medical School. R. A. Marmion, U. S. N.
80 Military Hygiene; Its Theoretical and Practical Study in the Regular Army and Militia Forces. R. Smart, U. S. N.
81 Field Medical Organization. H. L. Gilchrist, U. S. A.

Southern Medicine and Surgery, Chattanooga, Tenn.

June.

82 Tuberculosis Cutis. J. M. King, Nashville, Tenn.
83 Eczema—Its Symptomatology. Etiology and Diagnosis. T. W. Murrell, Richmond, Va.
84 Treatment of Eczema. F. H. Beadles, Richmond, Va.
85 Diphtheria. J. P. Blankenship, Maryville, Tenn.

Providence Medical Journal.

May.

86 Annual Address Before the Providence Medical Association. G. S. Mathews.
87 Francis Joseph Gall. J. E. Donley, Providence, R. I.
88 Bacteriology of Diphtheria. F. P. Gorham.
89 Municipal Control of Diphtheria. C. V. Chapin, Providence, R. I.

The Medical Age, Detroit, Mich.

May.

90 Preliminary Report of a Case of Lichen Scrofulosorum. N. E. Aronstam, Detroit, Mich.
91 Abdominal Diagnosis. H. E. Randall, Lapeer, Mich.
92 Early Diagnosis and Early Treatment of Otitis Media. N. C. Steele, Chattanooga, Tenn.

Medical Fortnightly, St. Louis, Mo.
May 25.

93 Differential Diagnosis of Ureteral Calculus from Pain. B. Robinson, Chicago.
94 Relation of Man to Nature (A Study Prompted by "Testimonies of the Sepulchres"). A. S. Ashmead, New York.
95 "Give and Take of Service." F. P. Norbury, Jacksonville, Ill.
96 General Treatment of Nervous Diseases. A. D. Young, Oklahoma City.

Buffalo Medical Journal.
June.

99 Review of Tuberculosis Problem. DeLancey Rochester, Buffalo, N. Y.
100 Metrorrhagia in Interstitial Nephritis. C. G. Cumston, Boston, Mass.
101 Treatment of Acute Otitis Media. W. S. Renner, Buffalo, N. Y.

Journal of Medical Society of New Jersey, Newark.
May.

102 Notes and Observations on the Etiology and Pathology of Lobar Pneumonia. H. S. Carter, New York.
103 Symptoms and Diagnosis of Acute Lobar Pneumonia. N. B. Potter, New York.
104 Treatment of Lobar Pneumonia. N. R. Norton, New York.
105 Considerations of Facial Spasm. J. L. Corning, New York.
106 Plea for a More Careful Examination in Rectal Cases. A. H. Lippincott, Camden, N. J.
107 Congenital Heart Disease. E. Holmes, Englewood.
108 Municipal Milk Inspection with a Note on Tuberculous Milk. W. S. Green, Camden.
109 Can Outbreaks of Measles be Controlled? T. N. Gray, East Orange, N. J.
110 Case of Meningitis (Typhoid or Cerebrospinal), Illustrating Difficulties of Early Diagnosis. J. E. Moore, Bridgton, N. J.
111 Intravenous Use of Formalin in Bacteriemia. H. A. Pulsford, South Orange, N. J.

The Canadian Journal of Medicine and Surgery, Toronto.
June.

112 The Necessity of Physical Health in Acquiring an Education. A. Thompson, Strathroy.
113 The Treatments of Catarrh, Especially Postnasal Catarrh. W. Erwin, Philadelphia.

Fort Wayne Medical Journal-Magazine.
May.

114 Medical Expert Evidence: Is a Radical Change in the Present System Advisable? J. Morris, Jr., Indiana.

Albany Medical Annals, Albany.
June.

115 Public Health Laboratory. H. D. Pease.

Journal of the Mississippi Medical Association, Vicksburg.
June.

116 Race Suicide. J. W. Young, Grenada.
117 Tetanus of the Newborn, with Report of Three Recoveries. M. J. Alexander, Tunica.
118 Summer Diarrhea of Infancy and Childhood, with Recent Investigations and Findings. T. C. Sexton, Laurel.
119 Medical Ethics. N. L. Clarke, Meridian.

New York State Journal of Medicine, New York.
June.

120 President's Address. H. Van Hoevenberg, Kingston, N. Y.
121 Bacteriologic Findings in the Spinal Fluid of Fifty Patients with Cerebrospinal Meningitis. T. W. Hastings, New York City.
122 Few Considerations in the Treatment of Various Cardiac Conditions. A. Lambert, New York City.
123 Treatment of Acute Lobar Pneumonia. R. Van Santvoord, New York City.
124 Case of Miliary Tuberculosis. R. E. Mitchell, Middletown, N. Y.
125 Food and Drug Adulterations. C. I. Redfield, Middletown, N. Y.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.
June 17.

1 *Acute Abdominal Symptoms. W. W. Cheyne.
2 Dilatation of the Gall Bladder Simulating Ovarian Cyst. A. Doran.
3 *Surgical Notes on Tuberculosis of the Kidney. H. A. Kelly.
4 Constriction of the Ureter. K. W. Monsarrat.
5 Value of the Use of a Shadowgraph Ureteric Bougie in the Precise Surgery of Renal Calculus. E. Fenwick.
6 *One Hundred Consecutive Laparotomies for Intussusception in Children. P. B. Clubbe.
7 *Curability of Hernia at all Ages by Operation. E. Deanesly.

1. **Acute Abdominal Symptoms.**—Cheyne discusses the differential diagnosis of what is called an acute abdominal illness, taking, in their order, pain, tenderness, abdominal rigidity, vomiting, collapse, rigor, pulse, temperature, gas, general condition of the patient, previous and after history, distension of the abdomen, and relative frequency. During the last three years, the total percentage of these acute abdominal cases admitted to the St. Thomas Hospital was as follows: Appendicitis and its complications, 37 per cent.; intestinal obstruction, 24 per cent.; intussusception, 15 per cent.; perforations of the alimentary tract, 11 per cent.; pelvic and gynecologic cases, 6 per cent.; abdominal abscesses, other than of the appendix, 3 per cent.; remainder, 4 per cent.

3. **Tuberculosis of the Kidney.**—Among the alternatives to be borne in mind in making a diagnosis of tuberculosis of the kidney, Kelly mentions the following:

1. Is the organism found the smegma bacillus? How was the urine secured? Was it by voiding or by catheterization?
2. Given the tubercle bacillus in the mixed urines, from which side does it come? Determine by catheterization the appearance of the ureteral orifice and the thickened ureter.
3. Is the opposite side entirely free from disease? Bear in mind that a simple pyelitis is not infrequent in the opposite kidney.
4. Bear in mind that the opposite ureter may show marked thickening (periureteritis) and yet the kidney be free from tuberculosis.
5. Note carefully to what extent the bladder is affected as having an important bearing on the operation and the subsequent treatment.
6. Determine the urea coefficient of the opposite kidney. Is it able to support life?
7. Look carefully for disease elsewhere. Is there a tuberculosis of the genital organs? Is there any pulmonary or glandular tuberculosis?
8. In injecting guinea-pigs remember that tubercle bacilli may pass out of the bladder, if your patient has phthisis, without injury to the kidney.
9. Remember that the enlarged kidney found in the loin may be the one functionally enlarged and, therefore, the only sound organ. Twice has such a kidney doing all the work of the body been taken out. There is a great risk of making this mistake.

6. **Intussusception in Children.**—Clubbe has performed 100 laparotomies for intussusception in children, with 63 recoveries and 37 deaths. The relative frequency of the various forms was as follows: Ileocecal, 64 patients, 43 cured, 21 died; ileocolic, 12 patients, 7 cured, 5 died; double, 20 patients, 11 cured, 9 died; colic, 3 patients, 2 cured, 1 died; enteric, 1 patient, 1 died. Clubbe employs the side incision, except when the mass is in the transverse or descending colon, when the incision should be made in the middle line, the umbilicus being the center of the cut. To close the abdomen, he nearly always uses through-and-through silkworm gut sutures with a Reverdin's needle. After the operation, the patients are given morphin, 1/40 to 1/20 grain, which is repeated, if necessary. Strychnin is given hypodermically until the immediate shock passes; sometimes salines. Within twelve hours, the colon is washed out with a weak solution of permanganate of potash, which nearly always produces a bowel movement.

7. **Curability of Hernia at All Ages.**—During the course of three years, Deanesly performed 142 hernia operations on 130 patients, in twelve of whom operations were performed on both sides. The youngest patient was 8 months, the oldest 70 years. Thirty-four patients were under 15 years, and 11 over 50 years. Of those under 15, 14 were infants under 2 years. Excluding strangulated cases, there was only one death, from pneumonia in an infant of 18 months old after a double operation. Eleven operations were for femoral hernia, all the rest for inguinal hernia. Of the latter, 3 were "direct," the remainder of the ordinary oblique variety. In 15 cases the patients could not be traced beyond one year, and their condition is unknown; but all were told to present themselves in case of return of the hernia. The remainder were all communicated with two years after the operation, and of these a few had died, without recurrence, from various causes unconnected with the hernia. Recurrence has occurred in 6 cases only, in every case less than twelve months after the operation. All six were cases of inguinal hernia, the femoral hernias having been found sound at the end of two years. Of the six relapses, in one case, a woman with a violent chronic cough, a small ventral hernia formed at the upper end of the scar. Three were ordinary inguinal hernias, of moderate size, in healthy young men. One was a direct inguinal hernia in an elderly man. One was a small inguinal hernia in a boy of 8. This patient was operated on again, and remains free from recurrence fifteen months after the second operation. In all these cases, except the first, in which it was an ordinary ventral hernia, the relapse precisely resembled the original hernia, and a new inguinal sac of peritoneum had been formed. In these cases it is probable that the original pouch had not been completely obliterated, owing

to a faulty performance of the original operation, and thus rendered the formation of a new hernia possible. In no case was the new hernia as large or as troublesome as the original one, and in all it was easily controlled by a truss.

The Lancet, London.

June 17.

8 Indications for Operation. Morison.
9 Forty Cases of Ureteral Calculus in which the Roentgen Diagnosis was Confirmed by the Recovery of the Calculus. C. L. Leonard.
10 Advantages of a Purin-free Diet. W. A. Potts.
11 Case of Infantile Splenic Anemia. S. G. Scott.
12 *Rapid General Myasthenia Gravis. H. W. Dodd.
13 *Simple Technic for Enumeration of Organisms in Fluids. W. H. C. Forster.
14 Seven Cases of Beriberi. P. N. Gerrard.
15 Fatal Case of Precipitate Labor. H. E. Rayner.

12. **Rapid General Myasthenia Gravis.**—The case reported by Dodd and Woodwark was most typical, and showed such a rapid progress that in four weeks, from a strong, healthy man, the patient became so extremely weak that he actually fell and could not raise himself. The onset of the trouble appeared to have followed an attack of influenza. A difficulty he had in feeding himself is believed to have added somewhat to his rapid increase in weakness. His mental condition was remarkably acute; there was a certain depression of spirits and a tendency to suspicion. He was treated with the usual tonics, but failed to improve. He remained under treatment for ten days, when he disappeared.

13. **Simple Technic for Enumeration of Organisms in Fluids.**—The method described by Forster is a modification of the technic introduced by A. E. Wright for the estimation of the number of living organisms in a given culture. The following is the apparatus required: Three sterile diluting pipettes; three sterile watch glasses; eight agar slopes numbered from 1 to 8 consecutively; eight gelatin slopes numbered from 1 to 8 consecutively, and a vessel containing sterile water. The stem of the pipette is graduated in ten divisions of five cubic millimeters each, the remaining graduation marks indicating 450 cubic millimeters and 500 cubic millimeters, respectively. The safety chamber is dispensed with, the shank of the pipette being merely bent to a right angle in the blow-pipe flame. The steps of the operation are as follows:

Four hundred and ninety-five cubic millimeters of sterile water are measured into each watch glass. This quantity is obtained by filling the pipette up to the 500 cubic millimeter mark and withholding five cubic millimeters when injecting into the watch glass. From the water to be examined five cubic millimeters are removed with the pipette—care being taken not to soil the pipette above the five cubic millimeter mark—and added to the contents of the first watch glass. This gives a dilution of 1 in 100. The contents of the watch glass are then thoroughly mixed with the pipette, and from this dilution 100 cubic millimeters (obtained by filling twice up to the 50 cubic millimeter mark, interspacing with an air bubble) are planted out in the gelatin and agar tubes numbered 3. Similarly, 10 cubic millimeters are planted out in the tubes numbered 4. From the 1 in 100 dilution five cubic millimeters are then transferred to the second watch glass, giving a dilution of 1 in 10,000. With the same pipette 100 cubic millimeters and ten cubic millimeters of the original water are planted out in the tubes numbered 1 and 2 respectively. The first pipette is then laid aside and another one is taken in hand. The contents of the second watch glass are thoroughly mixed and 100 cubic millimeters and ten cubic millimeters are planted out in the tubes numbered 5 and 6. From the 1 in 10,000 dilution five cubic millimeters are transferred to the third watch glass giving a dilution of 1 in 1,000,000. The third pipette is now taken in hand, and after thorough mixing 100 cubic millimeters and ten cubic millimeters of this dilution are planted out in the tubes numbered 7 and 8. If it is only desired to ascertain the limits within which the number of organisms per cubic centimeter must lie then the tubes are simply incubated in the vertical position and the results are interpretated as follows: Growth in tube 1, but not in tube 2, would place the number of organisms per cubic centimeter between 10 and 100. Growth in tube 2, but not in tube 3, would place the number of organisms per cubic centimeter between 100 and 1,000, and so on, the limits adopted being those in general use for the classification of waters by the number of contained organisms. If it is desired to know the actual number of organisms in terms of 10, 100, 1,000, etc., it will be necessary to distribute the water planted out over the surface of the medium and to incubate the tubes in the sloping position in order to prevent the accumulation of organisms at the foot of the slope. If preferred the quantity of water planted out may be spread over the surface of the medium with a glass rod, but in actual practice I have found this to be unnecessary as in the case of the larger quantities even distribution can be obtained by manipulation of the tube, while in the case of the smaller quantities sufficient distribution can be obtained by means of the pipette at the time of planting out.

Journal of Tropical Medicine, London.

June 1.

16 Inquiry into the Etiology and Pathology of Beriberi. H. Wright.
17 Case of Hematuria. A. F. Cole.

Glasgow Medical Journal.

June.

18 Report and Description of Specimens of Five Cases of Uterine Myoma and Three Cases of Ovarian Dermoid Tumor. J. K. Kelly.
19 *Appendicitis in Children. R. C. Dun.
20 The Amylolytic Action of Urine. G. H. Clark.

19. **Appendicitis in Children.**—Dun emphasizes the fact that appendicitis is not an uncommon disease in children; that it does not at first tend to be of a more serious type than in adults, but that the slighter cases are often difficult to diagnose and, therefore, apt to be overlooked. Dun urges a closer attention to recurrent attacks of colic, and points out the frequency with which diarrhea and bladder irritation are associated with inflammation of the appendix in childhood. When several slight attacks of appendicitis have occurred, the removal of the appendix is the best and safest treatment. When localized peritonitis is present, operation should be delayed until the quiescent period is reached, but pus formation must always be suspected and carefully watched for during the waiting period. Should abscess formation take place, immediate operation is demanded, but undue risks should not be run in attempting the removal of a firmly adherent appendix under such circumstances. The administration of purgatives and opium is not without risk, and is best avoided.

Annales des Mal. Génito-urinaires, Paris.

Last indexed page 139.

22 (XXIII, No. 5.) Etude clinique sur la pathogénie et la sémiotique de l'albumine. E. Lancereaux.
23 (No. 6.) *La séparation endovésicale des urines. Sa valeur au point de vue du diagnostic. T. Tuffier and A. Mauté.
24 *Rectal Palpation in Diagnosis and Treatment of Acute Gonorrheal Urethritis. Le toucher rectal. P. Lebreton.
25 Des uréthrites aigues non-gonococciques. T. Vannod (Berne).
26 De l'électrolyse dans le traitement des rétrécissements de l'urètre. Alcayde.
27 (No. 7.) Les affections tuberculeuses des reins (of kidneys). L. Bernard.
28 *Dispositif nouveau pour redresser les images cystoscopiques (to straighten view through cystoscope). P. Denis.
29 (No. 8.) Fistules rénales consécutives à la néphropexie. F. Gardner (New York).
30 De l'intervention opératoire dans les néphrites et dans certaines affections médicales du rein (of kidney). A. Yvert.
31 Quelques mots sur l'ouanisme. C. Féré.
32 La rachistovainisation dans les maladies des voies urinaires. P. Héresco and L. Strominger.
33 (No. 9.) Traitement des prostatiques en rétention incomplète chronique aseptique avec dilatation de la vessie (dilatation of bladder in treatment of hypertrophied prostate). Nicolich (Trieste). See page 588 of last volume of THE JOURNAL.

23. **Intravesical Separation of Urine from the Kidneys.**—Tuffier's experience has been favorable with the intravesical segregators of Luys and Cathelin, and he thinks that this mode of examination has won a definite place for itself. To obtain the most instructive findings, the conditions should be reproduced identically at each test, and the patient should take nothing but milk during the preceding four or five hours. He analyzes the findings when the segregated urine is examined every half-hour. It is impossible to locate a tumor in the kidney exclusively from the functional urinary findings. Many causes are liable to reduce the output of a kidney occasionally, such as mere hysteric nephralgia alone. There is considerable sediment, even in normal urine, after introduction of a separator into the bladder. The ease and simplicity of the technic and the instructive data obtained by the method commend it for general adoption on condition that the points in which it fails are appreciated, that allowance be made for them, and that too much is not expected from mere endovesical segregation of the urine.

24. **Rectal Palpation in Acute Urethritis.**—Lebreton has practiced rectal palpation in 200 cases of acute gonorrheal urethritis. The infection was less than a week old in 73; less than two weeks in 31; less than three weeks in 18; less than a month in 21; less than two months in 30; less than a year in 24, and from this to two years in 3. He found that the posterior urethra was invaded much oftener than he had supposed, and very early. The proportion in the first week was 58.9 per cent.; in the second week, 77.42 per cent., and by the third or fourth week fully 88.8 per cent. Palpation and mas-

sage through the rectum are useful for diagnosing and treating such cases, especially with "expression" of the prostate. If pressure with the finger fails to elicit pain in the region of the prostate, massage is useless and even dangerous, as it irritates a previously more or less sound organ. The same is true when pressure elicits pain only on the median line, showing that the prostatic urethra alone is involved. The massage should never be done without preliminary copious lavage of the bladder. The palpation and massage should be guided by the patient's sensations, keeping it within bounds so as not to cause very much pain.

28. **To Straighten View Through Cystoscope.**—The cystoscopic picture is received on a small square of ground glass with a line traced horizontally across it. When the glass is turned over and the line held parallel to the sagittal plane, the picture showing through on the smooth side of the glass is identical with the true picture in the bladder.

Berliner klinische Wochenschrift.

34 (XLII, No. 21.) *Zur Bewertung des Tremors als Zeichen des Alkoholismus. Fürbringer.
35 *Zur Kenntnis der Hernia uteri inguinalis und der histologischen Veränderungen verlagerter Ovarien. R. Birnbaum.
36 *Hydrotherapie bei Syphilis und Haut-Krankheiten (cutaneous affections). C. Bruhns.
37 Balneologic Laboratories in Health Resorts.—Ueber Aufgaben und Ziele der balneologischen Laboratorien in den Kurorten. E. H. Kisch.
38 *Zur Behandlung der Herzverletzungen (injuries of heart). A. Neumann.
39 *Large Doses of Olive Oil in Treatment of Stomach Affections.—Zur Frage der Verwertbarkeit grösserer Dosen Olivenöl in der Therapie der Magenkrankheiten. O. Blum. (Commenced in No. 20.)
40 *Cytorhyctes luis Siegel. F. E. Schulze.
41 Zur Diagnose und Behandlung des Kehlkopfkrebses (laryngeal cancer). G. Finder.
42 *Marmorek's Antituberkulose-Serum (official report). E. Lewin.
43 The Red Cross and Prevention of Epidemics.—Der preussische Landesverein vom Roten Kreuz und seine Mitwirkung bei der Abwehr der Seuchengefahr. Kimmle.
44 Schillers Beziehungen zur Natur und Heilkunde (relations to natural science and medicine). C. Posner. Id. R. Greeff.

34. **Tremor as Sign of Abuse of Alcohol.**—Fürbringer states that in more than half of 500 persons examined the tremor observed had no alcoholic foundation. Severe tremor usually coincided with alcoholism, the proportion of probabilities in favor of the latter being 91.5 per cent., but the moderate degrees proved to be no criterion as to the liquor habit. He noticed that the female sex displayed a greater tendency to tremor than the male.

35. **Inguinal Hernia of Uterus.**—Birnbaum has been able to find only 23 cases in the literature. He reports in detail a case personally observed. It was distinguished by the fact that the ovary was included also in the hernia. The genital organs had rather an infantile character, and the patient had never menstruated, although married for eleven years. The hernia was first noticed at about the age of 5. It grew to be somewhat larger than a walnut and could be pushed down into the labium.

36. **Hydrotherapy in Cutaneous Affections and Syphilis.**—Bruhns expatiates, in the course of this article, on the benefit frequently derived from hot baths in pruritus, especially hot sitz baths in pruritus ani.

38. **Treatment of Heart Wounds.**—Neumann's experience has been in favor of drainage of the pericardium rather than immediate suture. In a case which he reports in detail, a man of 53 had been stabbed in the right ventricle, and the edges of the wound were so inflamed and the general condition so desperate that suture was out of the question. He passed a needle through the right edge of the wound in the pericardium and of the wound in the myocardium, from without inward, bringing the needle out through the other side of the wound. Two threads were introduced in this way, a sponge was applied over the wound and the ends of the thread tied over the sponge. The tampon was thus outside the heart and was held firmly by the threads. The patient succumbed in forty-five minutes, but the technic fully established its value. In another case, the stab wound was in the fifth and sixth interspace, and the costal cartilage and intercostal artery had been severed. The knife had entered the pericardium, which was full of partly coagulated blood. As no lesion could be found in the heart proper, he inserted a long strip of gauze, passing it around the heart as high as the auriculoventricular boundary. The heart tolerated this drainage without disturbance; the pulse was quiet and regular by the next day. The gauze was removed on the twelfth day, and the patient has been in good health for the twelve years since. He has never exhibited symptoms typical of adhesion of the sheets of the pericardium, although in the first four years there were occasional attacks of vertigo, etc., suggesting irritation of a hystero-epileptic center.

39. **Large Amounts of Olive Oil in Treatment of Stomach Affections.**—Blum reports experience with large amounts of olive oil in treatment of stomach affections at Ewald's clinic. It was found that only a few persons were able to take the oil without repugnance. In cases of hyperchlorhydria, with or without hypersecretion, the oil had a favorable action by reducing the values of acid. It promoted natural movements of the bowels and general nutrition. No favorable influence could be discovered in cases of ulcer in stomach or duodenum or organic stenosis of the pylorus. The oil is absolutely contraindicated in extreme stenosis. In one case of pyloric spasm the oil failed entirely. The particulars of the 18 cases in which a course of oil was tried are given in full. Renewed hemorrhage followed in 2 cases of ulcer, possibly owing to some irritating action from the oil on the ulcer.

40. **Siegel's Cytorhyctes Luis.**—Schulze gives the particulars of the parasite which Siegel has recently reported as found in smallpox, foot and mouth disease, scarlet fever and syphilis. A high-power microscope, magnifying 1,000 times, is necessary to detect them. They show up best in the kidneys three weeks after inoculation of rabbits with syphilis. They range in size from .5 to 2 microns, and are seen as flattish, long, pear-shaped bodies, actively motile, curling into a ring occasionally. The smaller ones are rounder, with a flagellum. They take the hematoxylin-azure stain, and this reveals from 2 to 16 nuclei.

42. **Antituberculosis Serum.**—See news columns, page 52.

Centralblatt f. Chirurgie, Leipsic.

Last indexed XLIV, page 1969.

45 (XXXII, No. 18.) *Ein neues Verfahrren zur Radikal-Operation grosser Schenkelbrüche (large femoral hernia). E. A. Polya.
46 Uber Orchidopexie bei inguinalem Kryptorchismus. de Beule.
47 (No. 20.) Zur Technik der Amputatio penis (Witzel's technic). P. Janssen (Bonn).
48 (No. 23.) *Zur Blasennaht nach der Sectio alta (suture of bladder). C. Hofmann.
49 (No. 24.) *Zur Technik der Knie-Gelenk-Arthrodese (scraping out knee joint). H. Turner (St. Petersburg).

45. **Operation for Large Femoral Hernia.**—Polya gives the details of a technic for obliterating the femoral canal by plugging it with the entire thickness of the sartorius muscle. The operation has been performed twice at von Herczel's clinic at Budapest with very satisfactory results. One of the patients succumbed not long after to an intercurrent infectious disease, and the autopsy demonstrated the perfect anatomic results obtained by this technic. The incision is in the shape of a T or inverted L. The saphena is ligated and severed, and the hernial sac tied and buried if possible. The sheath of the sartorius is slit across below the level of the canal, and the sartorius muscle is cut a trifle above this slit. The proximal stump of the muscle is then worked through the saphenous opening above the large vessels and sutured, after being pushed as far into the canal as it can be made to go. Two or three stout catgut threads are passed through Poupart's ligament, the implanted sartorius and the sheath of the pectineus, and the muscle is pulled deep into the femoral canal as the threads are tied. A flap is made by cutting the fascia lata, and it is turned back and sutured to Poupart's ligament, to the sheath of the pectineus and to the sartorius below.

48. **Suture of Bladder After Suprapubic Incision.**—Hofmann has long been preaching the necessity for systematic treatment of the bladder to reduce inflammation before attempting surgical intervention on the organ. It consists of absolute bed rest, possibly for several weeks, with antiseptics internally,

hydropathic packs, and rinsing of the bladder. He used to believe that tamponing of the prevesical space and the permanent catheter were indispensable, but he has learned that the well-sutured wound is always water-tight for the first few days. If the prevesical space is partially obliterated by suturing the bladder to the abdominal wall, adhesions form between the outer layer of the bladder wall and the fascia in the abdominal wall, just as in similar operations on stomach or intestines. In his numerous experiences, he has never had any infiltration of urine when these precautions were taken. In case it should occur, the pain would at once give the alarm and the prevesical space could be tamponed then as well as at first. He has also discarded the permanent catheter. Spontaneous urination is sometimes observed, but generally the catheter must be used twice a day, especially at first, as the fixation of the bladder to the abdominal wall entails some residual urine. The permanent catheter must have an unfavorable influence on the healing of the wound; it is far preferable to introduce the catheter anew twice a day. An approximately normal condition of the urine before the operation is indispensable to the success of this technic.

49. **Arthrodesis of Knee.**—Turner describes the technic of the operation which aims to induce ankylosis in an abnormally lax joint. Hagen-Torn has been perfecting the technic, and Turner here gives illustrations of two instruments, resembling "safety razors," which much facilitate the operation. He also mentions a number of minor points, commending Textor's arc incision as the simplest and most convenient. His results have been excellent in his 15 cases.

Centralblatt f. Gynaekologie, Leipsic.

Last indexed XLIV, page 1969.

50 (XXIX, No. 18.) Zur Lehre vom Epithelioma chorioektodermale. L. Pick.
51 Increase of Hemagglutinins in Childbed.—Vermehrung der Hämagglutinine im Wochenbett. F. Schenk.
52 (No. 19.) Lutein Cells During Pregnancy.—Zur Frage der Luteinzellenwucherung in atretischen Follikeln während der Schwangerschaft. L. Seitz.
53 *Beitrag zur Kasuistik der intra-uterinen Fremdkörper (foreign bodies). C. Knoop.
54 *Zur Methodik der Sterilisation. K. Reifferscheid.
55 (No. 20.) *Zur Alexander-Adams'schen Operation. H. Fuchs (Kiel).
56 *Zur Anatomie und Genese der Kopfnickergeschwulst des Neugeborenen (congenital tumor in sterno-mastoid muscle). L. Pincus.
57 "Instrument und Methode Bossi" (reply to v. Bardeleben). Hammerschlag.
58 (No. 21) *Künstliche Sterilisierung (artificial sterilization). R. Chrobak.
59 Meine Eklampsie-Theorie (reply to Liepmann). A. Dienst.
60 (No. 22.) Gibt es ein Epithelioma chorioektodermale des Eierstockes (of ovary)? F. Michel.
61 *Experimental Study of Contractions of Isolated Uterus.—Experimentelle Methodik des Uterus im allgemeinen und die Registration der Kontraktionen seiner Hörner im besonderen. E. M. Kurdinowski.
62 (No. 23.) *Importance of Physical Properties of Child for Birth Mechanism.—Bedeutung der physikal. Eigenschaften, etc. H. Sellheim.
63 *Sectio cesarea an der Moribunden. H. Füth.
64 Die Methoden zur Herbeiführung der weiblichen Sterilität (artificial sterilization). Rissmann.
65 *Zur Dilatations—Frage. de Seigneux (Geneva).
66 (No. 24.) *New Pelvimeter.—Ein neuer Beckenmesser zur direkten Bestimmung des geraden Durchmessers des Beckeneinganges. A. Solowij (Lemberg).
67 *Zur Therapie der Hyperemesis gravidarum. R. v. Uhle.
68 Zur Frage der inneren Sekretion von Ovarium und Placenta. G. Fleck.

53. **Foreign Bodies in Uterus.**—Knoop relates the history of a hair pin which had been introduced in some way into the uterus four years after the menopause, but caused no disturbances for six years. Symptoms then developed suggesting cancer, but the discovery and removal of the hair pin restored conditions to normal. In another case a wad of crumpled newspaper was expelled during childbirth. It must have been in the vagina or cervix for some time before the onset of pregnancy.

54. **Artificial Sterilization.**—Reifferscheid reports a case in which excision of a piece of each tube, 2 cm. in length, and burying the uterine stumps under a fold of peritoneum failed to prevent conception later. Thread had been used instead of catgut to make the results more permanent. The operation had been done at the time of a Cesarean section.

55. **Alexander-Adams Operation.**—Fuchs reviews his experience with 220 cases in which this operation was performed. Time has gradually limited more and more its field of usefulness, so that the indication for it now is only simple, movable retroflexion in the rare cases in which any operation is required. For this condition, however, it is ideal.

56. **Origin of Congenital Tumor in Sternomastoid Muscle.**—Pincus published, ten years ago, a monograph on obstetric injuries of the sternocleido muscle. In addition to those therein described, he calls attention now to a congenital tumor which he had occasion to observe recently in a child born spontaneously under normal conditions. The child died of diarrhea not long after birth, and the microscope showed that the muscle tumor was of intrauterine inflammatory origin, a process of chronic interstitial myositis.

58. **Artificial Sterilization.**—Chrobak discusses the various indications which justify artificial sterilization of a woman. Chronic nephritis is one of them, but psychic disturbances, he thinks, can scarcely be included in the list, or only exceptionally, and only after the most serious deliberation on the part of the psychiatrist in charge of the case. In regard to tuberculosis, he ranks the interruption of the pregnancy on the same plane as cancer of the uterus in this respect. Incipient, curable tuberculosis is aggravated by a pregnancy, and the latter should be terminated at once, just as no one would delay a moment to remove the pregnant uterus when certain of its cancerous degeneration. To allow the pregnancy of a woman in incipient tuberculosis to continue until there are prospects of a viable child is compatible only with the belief that pulmonary tuberculosis does not make gigantic strides during pregnancy—and this belief is contrary to his views and experience. In advanced tuberculosis, the question of artificial sterilization must be decided by the physician for each individual case. Injuries of the uterus may afford an indication in certain cases in which rupture is liable to occur during a pregnancy. His experience has been very unfavorable with organs thus weakened by previous traumatism or lesions of various kinds, and especially by extensive operations, such as the removal of multiple myomata. Artificial sterilization is preferable to allowing the necessity for abortion in such cases.

61. **Experimental Study of Contractions of the Uterus.**—Kurdinowski gives an illustrated description of the technic by which he is able to study the motor functions of the isolated uterus and to register the contractions of the cornua. The work was done at the physiologic laboratories at Leipsic and Zurich on rabbits anesthetized by rectal injection of chloral.

62. **Birth Mechanism.**—Sellheim states that the fetus assumes the form of a cylinder to the utmost possible extent during delivery, in order to reduce friction to the minimum. At the same time, and for the same purpose, it turns on its axis to adapt itself to the birth passage.

63. **Cesarean Section on the Moribund.**—Füth remarks that he knows of only two cases of Cesarean section in extremis, reports of which have been published in this century. He adds a third to the list. The patient had a heart affection, and as labor began the heart symptoms became extremely threatening. Cesarean section was done at once, when the symptoms took a favorable turn. The patient lived for several days. The benefit observed in this case after extraction of the child, he says, should encourage others in similar cases not to wait until death has actually occurred, but to undertake the section early, not only to save the child, but also in the interests of the mother.

65. **Instrumental Dilatation.**—Seigneux' instrument has four branches which fold together into a small compass. They are operated by a thumb screw in the handle, and a graduated scale allows oversight of the amount of dilatation realized. The branches are in three sizes, narrow, medium and broad. The set of narrow branches is used first, and then, as the cervix becomes dilated, the sets of larger branches are substituted in turn. The details of the instrument are shown in six illustrations.

66. **New Pelvimeter.**—Solowij's measure consists of a scissors-like instrument with graduated scale between the rings of the handles. The blades terminate in a pair of branching antennæ with rounding tips. The distance between the tips is registered on the scale between the handles. When introduced into the pelvis, the longer, rear branch fits against the promontory and the other branch against the symphysis.

67. **Treatment of Hyperemesis Gravidarum.**—Uhle reports a case of protracted incoercible vomiting during the third month of pregnancy, persisting for weeks even after entire suspension of food or medicines by the mouth. The uterus was in pronounced anteflexion. After failure of all other measures, and as a partial preliminary to artificial abortion, a colpeurynter was placed in the vagina just beyond the entrance and moderately filled, thus lifting the uterus by pressure from below. The result was the immediate suspension of the vomiting; the patient was soon able to take a little milk. The colpeurynter was removed at night, but on recurrence of the vomiting was replaced the next morning, with the same successful results. It was removed again at night and there was no further trouble, the pregnancy progressing to a normal termination.

Deutsche medicinische Wochenschrift, Berlin and Leipsic.

69 (XXXI, No. 21.) *Einiges über die drohende Epidemie der Genickstarre (cerebrospinal meningitis). v. Leyden.
70 *To Designate Location of Apex Beat.—Wie ist bei Untersuchungen, besonders bei Gutachten, die Herzspitze topographisch zu bestimmen? A. Kirchner.
71 *Die Neurasthenie in Arbeiterkreisen (among wage-earners). P. Leubuscher and W. Bibrowicz.
72 *Die Cyklodialyse, eine neue Glaukomoperation. Heine.
73 *Cause, Prevention and Treatment of Appendicitis and Perityphlitis.—Ursache, Verhütung und Behandlung des perityphlitischen Anfalls. F. Karewski.
74 New Ready-to-Apply Dressings.—Ein neuer Einzelverband und eine neue Tamponadepatrone. A. Heermann.

69. **Cerebrospinal Meningitis.**—The epidemic at Königsberg in 1865 is described as witnessed by von Leyden. He refers in particular to the fulminating cases in which persons were stricken and fell dead at their work. He does not approve of baths for adults, as the slightest touch is so painful; repose, ice bags and nourishment, with morphin subcutaneously, he thinks, should be the main reliance.

70. **To Designate Location of Apex.**—Kirchner recommends that the heart apex be located by its distance from the median line and not from the nipple line, as the location of the latter differs so widely in different persons. If the apex beat is not perceptible, the apex can be located by light percussion; sagittal percussion gives more accurate findings than radial.

71. **Neurasthenia Among the Working Classes.**—The various sanitariums conducted by the Berlin National Sickness Insurance Society have had 1,564 cases of neurasthenia in their care since the first was opened in 1894. Of this number, nearly 16 per cent. were typesetters, nearly 10 per cent. cabinet makers, and 5 per cent. locksmiths. These three trades thus supply nearly 32 per cent. of the total material. In only 5.7 per cent. of the total number were there alcoholic antecedents, and in only 0.7 per cent. abuse of tobacco. The patients were generally between 25 and 45 years of age, and in three-fourths the neurasthenia was undoubtedly acquired. Early and adequate sanitarium treatment gives satisfactory results.

72. **Cyclo-dialysis, a New Operation for Glaucoma.**—In this communication from Uhthoff's clinic at Breslau, Heine describes a means of opening communication between the anterior chamber and the suprachorioidal space. After incising the sclerotic near the limbus, the ligamentum pectinatum is slowly pierced with a stiletto. No vitreous humor follows the gradual withdrawal of the stiletto, but by the second or third day the intraocular tension will be found much reduced.

73. **Prevention of Appendicitis.**—Karewski concludes his monograph with the remark that clinical experience and autopsy findings all confirm the assumption that enterocolitis is the common cause of appendicitis. That consequently every intestinal catarrh should be regarded as a serious affection requiring careful treatment to prevent trouble at the appendix.

Monatshefte f. praktische Dermatologie, Hamburg.

Last indexed XLIII, page 1508.

75 (XXXIX, Nos. 7-8.) *Mykosis fungoides und Leukämie. M. Pelagatti.
76 (No. 9.) Zur Technik der Urethral-Injektionen. Vajda.
77 Bemerkungen zu Brandweiners Fall von neurotischer Haut-Gangrän (of skin). Kreibich.
78 (No. 10.) Dermatotherapeutische und urologische Beobachtungen (observations). Weitlaner.
79 Drei Fälle von Pruritus nach Tabak-Genuss (pruritus after smoking). Bottstein.
80 (No. 11.) Zur Histologie des Hauthorns (keratoma). C. Philip.
81 Fall von Mykosis fungoides. J. Ullmann (Palermo).
82 *Changes in Skin with Kidney Affections.—Hautveränderungen bei Nierenkranken. A. Jordan.
83 (No. 12.) Zur Anatomie des Präputiums. E. Delbanco (Hamburg). (Commenced in No. 11.)
84 *Zur Tabes-Syphilisfrage im Anschlusse an einige mit manifester Syphilis verbundene Tabesfälle. J. Guszman.
85 Zur Therapie der Impetigines. Honcamp.

75. **Fungoid Mycosis and Leukemia.**—Pelagatti reports a case of the association of these two affections, suggesting the nosologic identity of the two processes. The patient was a man of 53 who presented the typical picture of fungoid mycosis, while the blood and the postmortem findings testified to the existence of myelogenic leukemia. Histologic investigation of the efflorescences on the skin revealed the features characteristic of metastases of the morbid process involving the bone marrow. He presents numerous arguments to sustain this view of the close connection between the mycosis and the leukemia, and brings up and answers a number of objections that might be urged against this assumption that the fungoid mycosis is merely the localization in the skin of a general leukemic process. The first symptoms noted had been itching and spots on the skin two years before death.

82. **Changes in Skin with Kidney Affections.**—Jordan refers to 3 cases of rebellious excoriations, pustules, local edema, pruritus or an eczematous eruption, observed in persons under treatment for a kidney affection. Local measures proved ineffectual, but the skin lesions subsided as soon as the kidney functions were regulated. The rebellious cutaneous affections were of comparatively long standing, but, thanks to the treatment of the kidneys, conditions were soon restored to normal, as far as the skin was concerned. He suggests that certain dermatoses might be classed as "albuminuric dermatoses," amenable only to measures directed against the underlying kidney affection. He believes that the latter has the tendency to render the skin more sensitive, and thus favors the development of cutaneous affections.

84. **Syphilis and Tabes.**—Guszman insists on the necessity for examining for possible tabes every patient presenting the manifestations of tertiary syphilis. When this is done systematically, an incipient tabes may be discovered and arrested by suitable treatment.

Münchener medizinische Wochenschrift.

86 (LII No. 19, May 9.) Die Pathogenese des Ikterus. D. Gerhardt.
87 Differentiation of Various Albumins from Same Organism by Precipitin Reaction: "Biologic Test."Präzipitinreaktion, etc. G. Forssner.
88 *Zur Frage der atonischen Magenerweiterung (dilatation of stomach). C. Wegele.
89 *Haemonephrose und Nierenkrebs (cancer of kidney). C. Hueter.
90 *Zur Behandlung des Heufiebers (hay fever). A. Denker.
91 *Zur Behandlung der Leukämie und Pseudoleukämie mit Röntgen-Strahlen. F. Lommel.
92 Beitrag zur Wirkungsweise der Edebohls'schen Operation (mode of action). Scheben.
93 Einfluss der Vibration auf das Faradisations-Gefühl (sensation). V. Schlapfer.
94 *Zur chemischen Imitation der biologischen Strahlenwirkung (action of rays). J. Schlachta.
95 *Notiz über eine neue Form der Zählkammer (blood counting apparatus). K. Burker (Tübingen).

88. **Dilatation of Stomach from Atony.**—Wegele has had three cases under observation in which the symptoms indicated typical dilatation of the stomach, presumably from pyloric obstruction. The motor insufficiency was of the second degree. The patients recovered under merely internal and dietetic measures, and have been in perfect health for years. This outcome speaks decidedly against the assumption of pyloric obstruction, he thinks, and in favor of a mere atonic ectasia as the cause of the trouble. This is a rare condition,

but it certainly occurs sometimes, occasionally in connection with some actual lesion. An atonic condition is the greatest obstacle to the success of a gastroenterostomy, and favors the vicious circle. When water is poured into the stomach it is promptly expelled in siphonage in case of ectasia from stenosis, but when the ectasia is due to atony the water comes out slowly and deliberately. Another argument in favor of the assumption of atonic ectasia is the analogy between it and acute dilatation of the stomach after gross errors in diet, as also the paralysis observed at times after trauma and laparotomies. The stomach remains relaxed and enlarged even when empty. Wegele has appealed to a number of surgeons for their experience in this line, but has obtained scanty data. Ectasia without organic pyloric stenosis was noted only in exceptional cases and then as an accompaniment to gastroptosis or chronic spasm of the pylorus. Rigid pyloric spasm is frequently observed, and its prompt subsidence under the surgeon's eyes, but he knows of no instance of tonic contraction of the pylorus on record. Ectasia from stenosis may vary in its intensity at different times, and transient improvement may be noted, but permanent recovery from this form of dilatation has never been attained by internal treatment alone.

89. **Hemonephrosis and Cancer of Kidney.**—Hueter reports a case which demonstrates that a rupture can occur in a cystic kidney with consequent severe hemorrhage without perforation into the abdominal cavity. The fact that the kidney can be palpated does not exclude the presence of a large hydronephrotic sac. Another remarkable feature of the case was that no blood was found in ureter or bladder, although hematuria had been noted for two months before the trauma. The patient was a cabinet maker, 50 years old, who, as the result of an apparently insignificant traumatism, had ruptured a cystic kidney, causing considerable hemorrhage. The congenital hydronephrosis in the hilum had become a hematonephrosis. Hueter can find only three similar cases in the literature. The microscope revealed cancerous degeneration in the apparently sound part of the kidney—further evidence of the value of hematuria as a sign of malignant disease in this organ.

90. **Massage of Nose in Hay Fever.**—Denker reports that he has absolutely cured eight hay-fever victims by massage of the mucous lining of the nose. By this means he was able not only to cure an existing attack, but to prevent its recurrence in following seasons. He first anesthetizes the sensitive mucosa by swabbing it with a mixture of 1 part cocain and .01 part adrenalin in 10 parts distilled water, using a cotton-wound nose sound for the purpose. The massage is done with this sound dipped in a 10 per cent. antiseptic oil. He commences with slow, light stroking of the inferior turbinate, gradually increasing the rapidity and the pressure and passing to the middle turbinate, and thence, if possible, to the superior, returning over the mucosa of the septum. The massage is completed in two or three minutes at first and in from three to four as the patient becomes used to it. The procedure is repeated through each nostril every day, supplemented, if necessary, by instillation of diluted laudanum in the conjunctival sac. He thinks that it is more logical to remove the cause than to attempt to combat the established affection by antitoxin or otherwise.

91. **Leukemia and Roentgen Rays.**—Lommel reports three cases of leukemia, one was the lymphatic form in a new-born child, fatal in a few days. The parents were healthy, but the blood findings soon after birth were 1 white to 1.03 red corpuscles, and the spleen and liver were much enlarged from lymphoid tissue accumulations suggesting metastases. The second patient was a farmer of 27 with pronounced myeloid leukemia, who improved remarkably under Roentgen treatment. In sixty-five days the number of leucocytes dropped from 554,000 to 12,000, while the reds increased. The general health improved and the patient gained considerably in weight for a few months, and regarded himself as completely cured. Six months later, however, the blood findings showed again the myelogenic leukemic tendency, the number of whites having increased to 46,220, although the general health was apparently perfect. The patient was advised to take another course of Roentgen exposures. The third case was one of pseudoleukemia, with extreme anemia, in a 2-year-old boy whose mother and sisters also exhibited a leukemic tendency with enlarged spleens. He improved very much under Roentgen exposures, but succumbed to intercurrent pneumonia a few months later. The postmortem findings indicated that the Roentgen rays had induced marked curative changes in the spleen, but nothing was found to suggest that the circulating blood cells had been directly influenced by the rays.

94. **Chemical Imitation of Biologic Action of Rays.**—Schlachta's experiments have confirmed those of Werner, mentioned on page 1888 of the last volume of THE JOURNAL. They both found that oxidized lecithin had the same action in experiments on animals as radioactivated lecithin, that is, lecithin exposed to the action of radium or Roentgen rays. It is still open to question whether this action is due to the presence of oxygen or an alkali. A suspension of lecithin in water, heated for four hours in the warm bath, showed the same unmistakable action, although not very pronounced.

95. **New Form of Blood-Counting Apparatus.**—Bürker of Tübingen enumerates the drawbacks of the ordinary Thoma-Zeiss apparatus as the difficulty of making it work faultlessly, the liability to uneven distribution of the blood over the field, the dependence of the findings on the air pressure, and the small area of the counting surface. These are all avoided in the new apparatus, which is proving extremely satisfactory. An article on the subject appeared recently in *Pflüger's Archiv.*, page 426.

Gazzetta degli Ospedali, Milan.

Last indexed page 143.

96 (XXVI, No. 22.) Electricity of Human Body.—Sulla attivita elettrica del corpo umana. C. Garibaldi and F. Mariani.
97 *Sulla patogenesi dell' ateromasia adrenalinica e dell' ateroma in generale. N. Marini.
98 Sulle infezioni gastro-enteriche del lattanti (in infants). V. Maggioni.
99 Eziologia del morbo di Little. O. Broglio.
100 Hernia of Bladder.—Contributo alle ernie vescicali diverticolari. A. Cernezzi.
101 Brace for Habitual Luxation of Shoulder.—Contentivo delle lussazioni abituali della spalla. G. Cajozzo.
102 *Angiospasmo periferico ed uremia. A. Caprio.
103 (No. 25.) *Di un nuovo metodo di sieroterapia delle sifilide. L. M. Bossi.
104 Relations Between Chloroform Anesthesia and Elimination of Ureic Nitrogen.—Sui rapporti fra cloronarcosi ed eliminazione dell' azote ureico. N. Federici.
105 Errors in Freund's Test for Sulphuric Acid.—Erroneita del metodo Freund per la determinazione dell' acido solforico. E. Pittarelli.
106 Peculiar Course of Epidemic Suggesting Staphylococcus and Streptococcus Infection.—Decorso epidemico e polimorfo di un infezione coi caratteri delle stafilococcie e streptococcie. G. Morelli.
107 *L' iodo nella tifoide. G. Campanella.
108 Sulla cura del tetano. A. Giannelli.
109 Eritema nodoso e porpora febrile. A. Valli.
110 *Post-typhoid Abscesses and Hypodermic Medication.—Contributo clinico sugli ascessi post-tifici e l'influenza su questi delle infezioni ipodermiche medicamentose. E. Basurgi.

97. **Causes of Atheroma.**—Marini has been experimenting on animals with adrenalin and thus inducing atheromatous degeneration. He explains the mechanism of its action and states that hypertension is the primary and efficient cause for both experimental and clinical endarteritis with atheromatous degeneration. The adrenalin induces the hypertension in the experiments. In the clinic the same effect is produced by toxic substances generated in the organism which have a peripheral vasoconstricting action. Nature strives to favor their elimination from the body by the hypertension induced.

102. **Peripheral Angiospasm and Uremia.**—The attack described by Caprio was evidently a form of uremia, an uremic equivalent. The peripheral angio-spasm was very pronounced, and the symptoms indicated impending acute edema of the lungs with acute valvular insufficiency. Leeches to the feet and mustard to the chest, with diuretics and a milk diet, soon restored conditions to the previous state.

103. **Serotherapy of Syphilids on New Basis.**—Bossi believes that Colles' law and Profeta's law both indicate that the placenta serves as a filter, preventing infection of a non-syphilitic mother from a fetus with a paternal inheritance of syphilis, and of the non-syphilitic fetus from a syphilitic mother. The filter thus offered by the placenta prevents in-

fection, but it allows the passage of immunizing substances that seem to confer immunity in each case. Bozzi consequently conceived the idea that the immunizing substances must be particularly abundant in the blood of women free from manifestations of syphilis who have just been delivered of a syphilitic child. He suggests this as a new basis for serotherapy of syphilids, adding that further material might be procured from the blood in the umbilical cord in cases of syphilides in the course of pregnancy. His experiences have been too limited as yet to be any criterion for the value of the method, and he urges others to try it on a larger scale.

107. **Iodin in Typhoid.**—Campanella attributes both antiseptic and antitoxic action to iodin, and describes a number of cases in which it proved extremely effectual in typhoid fever. He injected it hypodermically according to Durante's technic.

110. **Post-typhoid Abscesses and Hypodermic Injections.**—Basurgi announces as the conclusions of considerable experience and observation that the typhoid bacillus circulating in the blood is liable to display a pyogenic action at points of lesser resistance. Hypodermic medication is liable to cause slight injury, sufficient to serve as a point of lesser resistance, and an abscess may form at the site of the injection, even when every aseptic precaution has been taken. These abscesses are painless, but should be opened and evacuated at the earliest possible moment, after which they soon heal.

Riforma Medica, Palermo and Naples.

Last indexed XLIV, page 1818.

111 (XXI No. 15.) *Blood Pressure, Seated and Reclining, in Various Diseases.—Sulle variazioni della pressione sanguigna, etc. C. Gennari.

112 Lid Plastics with Flap from Brow.—Blefaroplastica a lembo frontale mediano. E. Moretti.

113 (No. 16.) Caso di pancreatite cronica indurativa con stomaco a clessidra. Glastroplastica. Guarigione. (With hourglass stomach. Recovery.) F. Purpura.

114 *Studii sperimentali sulla endocardite tubercolare. B. de Vecchi.

115 (No. 17.) *Contributo alla cura delle occlusioni intestinali. F. Gangitano. (Commenced in No. 15.)

116 *Early Diagnosis of Tabes.—Intorno alla diagnosi iniziale della tabe dorsale. G. Severino.

117 (No. 18.) *Sulla permeabilita della parete intestinale ai batterii (of intestinal wall). S. Rindone.

118 *Action of Radium Rays on Rabic Virus.—L'azione dei raggi del Radio sul virus rabido in vitro e nell'animale. G. Tizzoni and A. Bongiovanni.

111. **Variations in Blood Pressure with Position.**—Gennari has been studying the variations in the blood pressure when the subject sits or reclines, comparing the findings in health and disease. In health, the pressure drops about 6 mm. as the subject sits up after reclining, while the pulse rate increases. In convalescents from typhoid or other infectious diseases or in severe anemia, the blood pressure drops and sometimes a dicrotic beat is observed, but the pulse shows marked increase, from 10 to 18 beats. The pulse rate becomes especially accelerated in typhoid, although the drop in the blood pressure is not very marked. In heart disease the pressure varies very little with the change of position. This differentiates organic heart trouble from the merely functional. In all his cases of neuroses of the heart the pressure became much reduced when the patient sat up, and the pulse became decidedly dicrotic, while these changes were very slight in case of organic disease.

114. **Experimental Tuberculous Endocarditis.**—De Vecchi has previously announced that the local presence of the tubercle bacillus is not necessary for the production of tuberculous endocarditis. The toxic products of the bacilli, associated with some slight trauma of the endocardium, are sufficient to produce the specific lesions. He has recently been studying the process that follows inoculation of a few tubercle bacilli into the cornea. The anatomic conditions there much resemble those in the endocardium. In both, the bacilli are unable to induce the formation of true tubercles, but they stimulate the tissues to a reaction which is apparently merely an ordinary, chronic inflammation.

115. **Treatment of Intestinal Occlusion.**—Gangitano relates the particulars of eleven cases representing different types of intestinal occlusion, to emphasize his plea for surgical interference in all cases if medical treatment fails. Even in apparently moribund cases the results may be unexpectedly favorable. Atropin should be tried after failure of other measures, if the case is not urgent. It was always well borne in his experience and proved useful sometimes even after operation. He insists on the advantages of evacuating the intestine through an opening made near the tract where the obstruction lies, with lavage afterward. He made an artificial anus in only one of the patients, but without benefit.

116. **Diagnosis of Incipient Tabes.**—Severino describes the course of a case in which incipient tabes was apparently arrested by mercurial treatment. He based his diagnosis principally on the absence of the Achilles reflex, the sluggishness of the pupil reflex and the marked lymphocytosis in the cerebrospinal fluid.

117. **Permeability of Intestinal Wall.**—Germs did not pass through the intestinal wall, in the experiments reported, except when there was some necrotic lesion extending through its entire thickness. Lesions merely in the serosa or muscle outside did not allow the penetration of germs.

118. **Destructive Action of Radium Rays on Virus of Rabies.**—Tizzoni describes two series of experiments which have attracted much attention. In the first, the virus was exposed *in vitro* to the action of the radium rays; in the second, animals were inoculated in the eye, or sciatic nerve, or under the dura mater with virus, and the part was then exposed to the rays for an hour a day for eight days. The results indicate that the radium rays destroy the virus of rabies both *in vitro* and in the living animal. In the animals the effect of the rays is the same whether the part inoculated was exposed to them or some distant region. The virus exposed *in vitro* evidently had been deprived of all toxic properties when injected into the eyes of animals afterward. When exposed only for a short time, it caused a slow, wasting, fatal affection, different in every respect from typical rabies. When animals inoculated in one eye with the virus were exposed at once to the radium rays, the virus was rendered harmless, even when only the opposite eye was exposed to the rays. Also, when the animal had been inoculated in the meninges or sciatic nerve, exposure of one eye sufficed to annul the toxic action of the virus anywhere in the body. He suggests that possibly virus attenuated by exposure to radium may prove an efficient material for Pasteur treatment. He hazards the suggestion that the radium rays disinfect or disintoxicate the entire nervous system when applied to the eye.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

DIE PALPABLEN GEBILDE DES NORMALEN MENSCHLICHEN KOERPERS UND DEREN METHODISCHE PALPATION. Nach eigenen Untersuchungen an der Leiche und am Lebenden. von Dr. Toby Cohn, Nervenarzt in Berlin. 1. Teil: Obere Extremitat. Mit 21 Abbildungen. Paper. Pp. 216. Price, 5.60 m. Berlin: Verlag Von S. Karger. 1905.

DIE KRANKHEITEN DES VERDAUUNGSKANALS (Oesophagus, Magen, Darm). Ein Leitfaden für praktische Aerzte. von Dr. Paul Cohnheim, Spezialärzt für Magen- und Darmkrankheiten in Berlin. Mit 17 Abbildungen. Paper. Pp. 247. Price, 5.60 m. Berlin: Verlag Von S. Karger. 1905.

THE SURGICAL ASSISTANT. A Manual for Students, Practitioners, Hospital Internes and Nurses. By W. M. Brickner, B.S., M.D., with 123 Original Illustrations. Cloth. Pp. 363. Price $2.00. New York: International Journal of Surgery Co.

TRANSACTIONS OF THE TENTH ANNUAL MEETING OF THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY, Held at Chicago, May 30-31 and June 1, 1904. Cloth. Pp. 431. New York: Published by the Society. 1905.

THE OFFICE TREATMENT OF RECTAL DISEASES EXPLAINED AND SIMPLIFIED. By R. D. Mason, M.D., Omaha, Neb. Illustrated. Third Edition. Cloth. Pp. 222. Price, $2.00. Minneapolis: Burton Co. 1905.

PHARMACOLOGY OF THE FLUID EXTRACTS IN COMMON USE. By J. S. Wright. Prepared especially for Students of Medicine. Leather. Pp. 225. Eli Lilly & Co., Indianapolis. 1905.

PSYCHIATRY. A Text-book for Students and Physicians, by S. Eaton, M.D., Cloth. Pp. 618. Price $4.00. Philadelphia: J. B. Lippincott Co. 1905.